WPL-3000

SERVICE MANUAL

IMPORTANT

- Do not carry out installation, operation, service, or maintenance until thoroughly understanding the contents of this manual.
- Keep this manual available at all times for installation, operation, service, and maintenance.

ISHIDA CO., LTD.

Manual No. 0077B

48725

You can help improve this manual by calling attention to errors and recommending improvements. Please express your comments to the nearest Ishida Company representative. **Thank you!**

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SAFETY CONSIDERATIONS

These safety measures must be followed to ensure the safe servicing of this machine:

Servicing is to be done by qualified service personnel only

These service instructions are for use by qualified service personnel who fully understand the potential hazards involved. To avoid any possible danger, do not perform any service procedures unless qualified to do so.

Perform only the specified service procedures

To ensure personal safety, do not perform any service procedures which are not specifically mentioned in this service manual.

Properly ground machinery

As a Class 1 electrical device, this machine requires protective grounding for safe operation.

Avoid servicing while power is being supplied

Machine servicing while power is being supplied and covers or enclosures are opened or removed should be avoided as much as possible. When servicing cannot be performed by any other means, service personnel should take precautions against the danger of electrical shock or other potential hazard involved.

Take precaution against residual electrical charge hazard

Capacitors inside the machine may still hold an electrical charge even after power is disconnected.

Use same type fuses and components for replacement parts

To avoid the potential hazards involved, do not replace fuses or components with types other than those specified in the parts list for this machine.

WARNING	Power supply to the machine is disconnected only when the electrical plug is removed from the electrical outlet. For protection against electrical shock, remove plug before performing any servicing to the machine.

The following symbols are used to alert service personnel of potential danger or special circumstances related to the safe and proper servicing of this machine:

WARNING	Precautions which must be followed to prevent the possibility of death or serious injury.
WARNING	Precautions which must be followed to prevent the possibility of light or moderately severe injury to personnel or damage to the equipment.
NOTE:	Important information for the operation of the machine.

GETTING STARTED

This service manual contains the procedures for servicing the WPL-3000 Index Conveyor. It is strongly advised that you read and clearly understand the contents of this manual before beginning any maintenance to this machine.

MAINTENANCE PRECAUTIONS

To insure the safety and long operating life of this machine, it is important to observe the following precautions:

- Keep the area around the machine clear of any dust and debris.
- Do not leave screws or other foreign objects in the machine after performing routine maintenance since this can cause major damage to the machine when the electrical switch is turned on.
- Always remove wires by holding the connector and pulling to disconnect. Do not disconnect by pulling on the wires themselves since this may cause a wire to snap or damage the connection.
- Before assembling or adjusting this machine, make sure you thoroughly understand and follow each step in the order indicated in this manual.

Table of Contents

1. Overview

1.1 External Parts and Names (I Line Type) 1-2
1.2 External Parts and Names (L Line Type) 1-3
1.3 Location of Safety Stickers 1-4

2. Setup

2.1 Confirm Before Delivery
2.1.1 Location 2-2
2.1.2 Installation Route 2-2
2.1.3 Electrical Power 2-2
2.1.4 Setup Environment 2-2
2.1.5 Work Clothes 2-3
2.2 Necessary Items for Installation
2.2.1 Tools 2-3
2.2.2 Manuals 2-3
2.3 Package Confirmation 2-4
2.4 Positioning and Adjusting Conveyor Stands
2.4.1 Fastening to Stand 2-5
2.4.2 Fastening Stands 2-6
2.4.3 Stand Fastening Method 1 2-7
2.4.4 Stand Fastening Method 2 2-7
2.5 Connecting Cable 2-8
2.6 Setup Procedures 2-9
2.7 Method for Threading Labels 2-10
2.8 WPL-3000 USA Rescue Mode 2-11

3. Test Mode

3.1 Menu Directory Diagram 3-2
3.2 Test Mode
3.2.1 Starting Test mode 3-3
3.2.2 Hardware Test (C01) 3-3
3.2.3 RAM Clear (C02) 3-6
3.2.4 Thermal Head Setting (C03) 3-7
3.2.5 Sensor Check (C04) 3-9
3.2.6 Extra Memory (C05) 3-9
3.2.7 Setting ROM Switch (C06) 3-9
3.2.8 Label Format Editing (C07) 3-12
3.2.9 Sales Mode Setting (C08) 3-12

3.2.10 Machine ID No. Setting (C09) 3-13
3.2.11 Preset Function Setting (C10) 3-14
3.2.12 Password (C11) 3-14
3.2.13 Data Transmission (C99) 3-15

4. Setting Mode

4.1 Menu Directory Diagram..... 4-2
4.2 Setup Mode
4.2.1 Label Format (b01) 4-5
4.2.2 Bar Code Setting (b02) 4-7
4.2.3 Code Settings (b03) 4-8
4.2.4 Setting Initial Data (b04) 4-9
4.2.5 PLU File (b08) 4-11
4.2.6 Preset Report (b10) 4-12
4.2.7 Registration Select (b11) 4-14
4.2.8 Total Mode Select (b12) 4-15
4.2.9 Password (b13) 4-15
4.2.10 Tray Master Registration (b15) 4-16
4.2.11 Conveyor Setup (b16) 4-16

5. Controller Unit

5.1 Overview 5-2
5.2 Block Diagram..... 5-3
5.3 Electronic Parts
5.3.1 Display Board 5-3
5.3.2 Junction/Buzzer Board..... 5-4
5.4 Display and Key Check 5-6
5.5 Disassembly Diagram 5-7

6. Weigh Conveyor

6.1 Overview 6-2
6.2 Block Diagram 6-3
6.3 Electronic Parts
6.3.1 Load Cell Unit 6-4
6.3.2 A/D Converter Board 6-5
6.4 Scale Check 6-6
6.5 Disassembly Diagram 6-7

7. Printer / Label Applicator Unit

7.1 Overview 7-2
7.2 Block Diagram 7-3
7.3 Electronic Components 7-4
7.3.1 Printer Unit (Thermal head, label sensor adjustment) ... 7-4
7.3.2 Label Applicator Unit 7-10
7.4 Adjustment Position of the Label Applicator Unit 7-14
7.5 Movement Test 7-15
7.6 Disassembly Diagram (Stand Unit) 7-16
7.7 Disassembly Diagram (Printer Unit). 7-16
7.8 Disassembly Diagram (Label Applicator Unit) .. 7-17

8. Weigh Conveyor Unit

8.1 Weigh Conveyor Unit 8-2
8.2 Block Diagram 8-3
8.3 Electronic Components 8-4
8.3.1 Power Supply Unit. 8-4
8.3.2 Drive Board (P-854) 8-5
8.3.3 Electromagnetic Valve 8-5
8.3.4 Air Cylinder 8-6
8.3.5 Application Timing Sensor 8-7
8.4 Elevator Check and Parts Adjustment 8-8
8.4.1 Weigh Conveyor 8-8
8.4.2 Conveyor Fall Prevention Screw Adjustment 8-9
8.5 Disassembly Diagram..... 8-10

9. Troubleshooting

9.1 Periodic Parts Replacement 9-2
9.2 Breakdown and Countermeasure 9-3
9.3 Error Messages 9-4

10. Load Cell Unit

10.1 Location of Main Parts 10-2
10.2 Replacing the Load Cell Unit 10-3
10.3 Span Calibration Adjustment 10-6

Appendix

A.1 Installation Notes A-2
A.2 Label Format Worksheets..... A-9

Chapter 1
Overview

1.1 External Parts and Names (I Line Type) 1-2
1.2 External Parts and Names (L Line Type) 1-3
1.3 Location of Safety Stickers 1-4

1.1 EXTERNAL PARTS AND NAMES (I LINE TYPE)

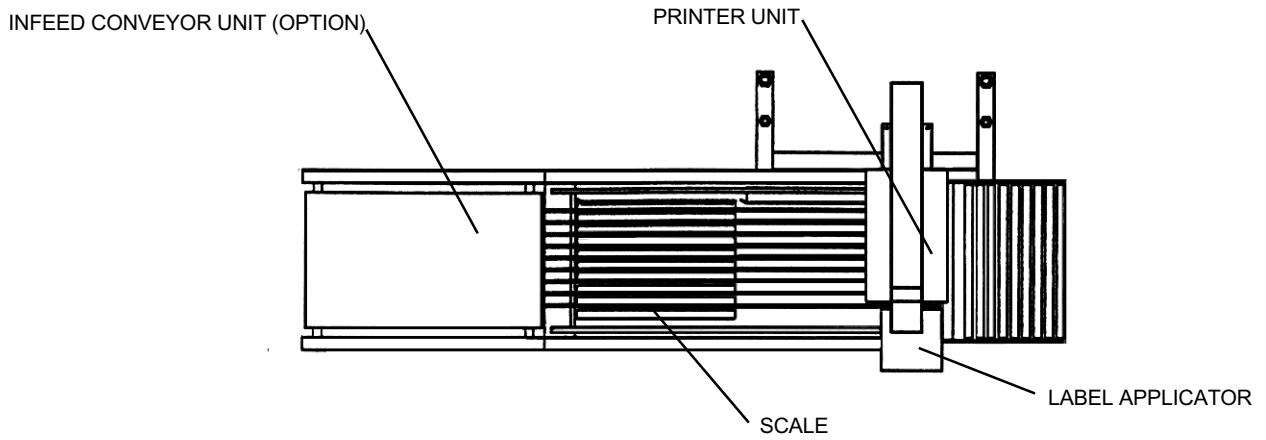


Fig. 1.1 WPL- 3000 (I Line Type) top view.*

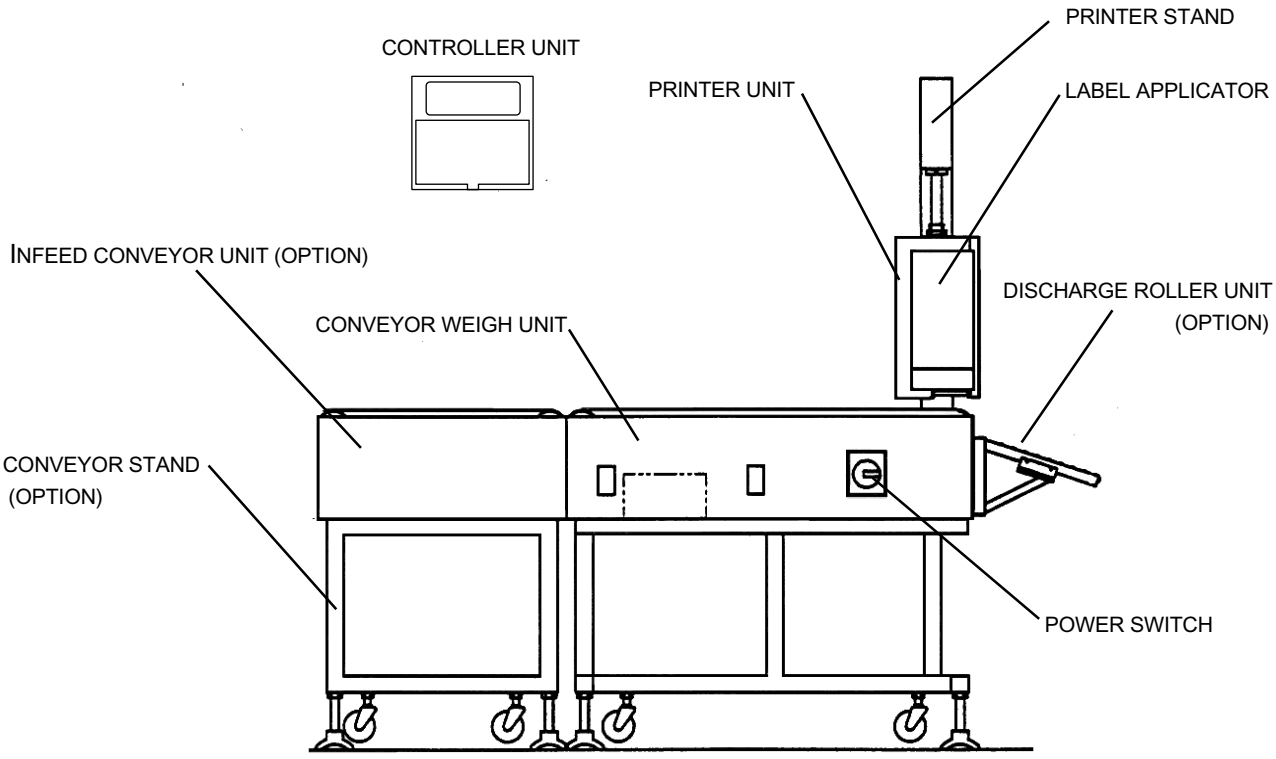


Fig. 1. 2 WPL- 3000 (I Line Type) front view.*

*** IMPORTANT NOTE – later versions of the WPL-3000 use a front mounted printer arm.**

1.2 EXTERNAL PARTS AND NAMES (L LINE TYPE)

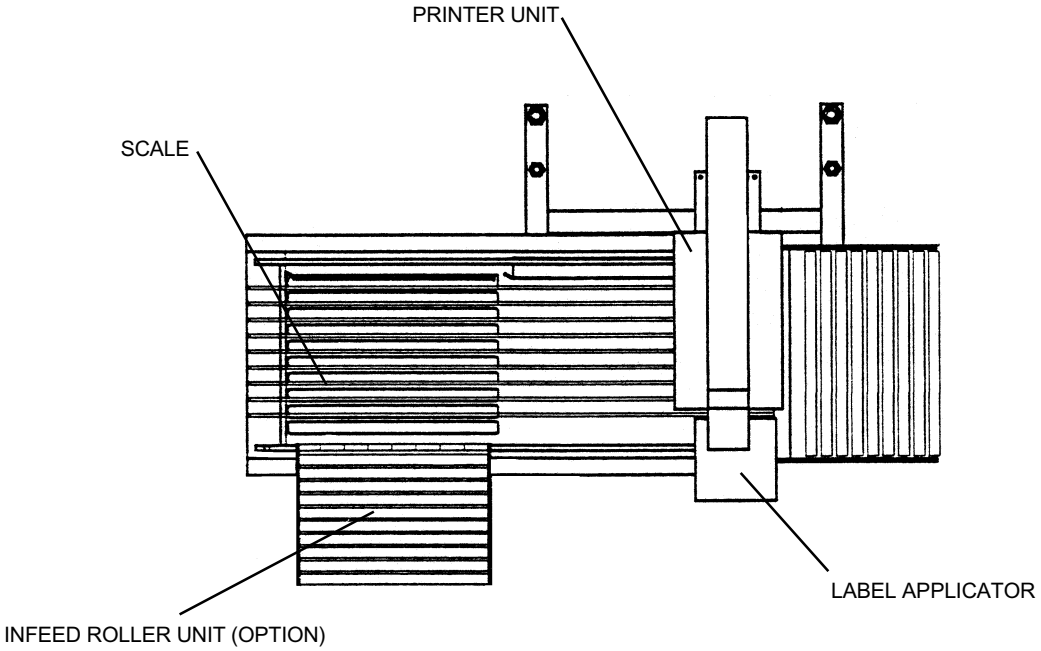


Fig. 1.3 WPL-3000 (L Line Type) top view.*

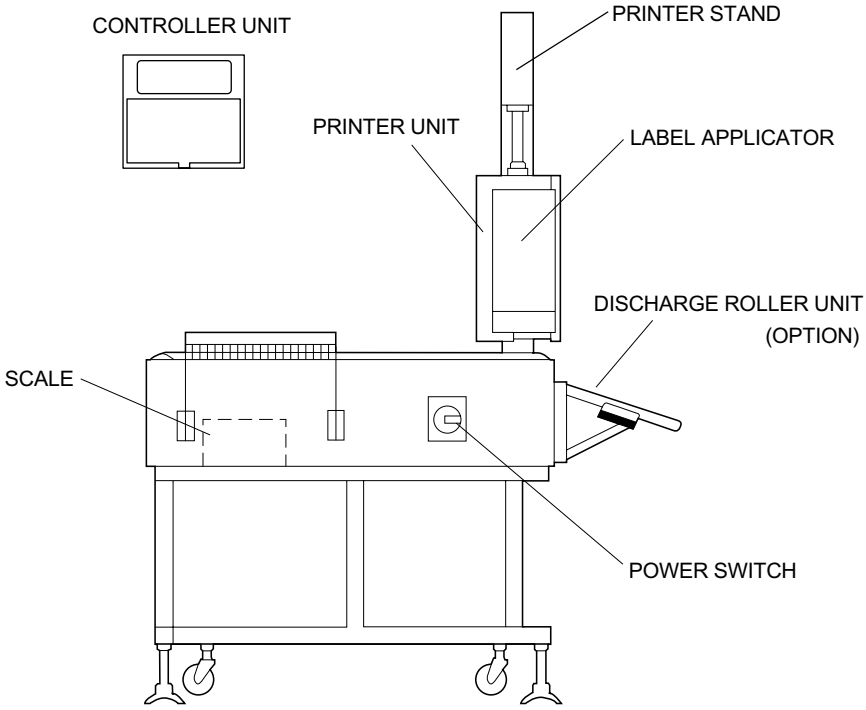


Fig. 1.4 WPL-3000 (L Line Type) front view.*

*** IMPORTANT NOTE – later versions of the WPL-3000 use a front mounted printer arm.**

1.3 LOCATION OF SAFETY STICKERS

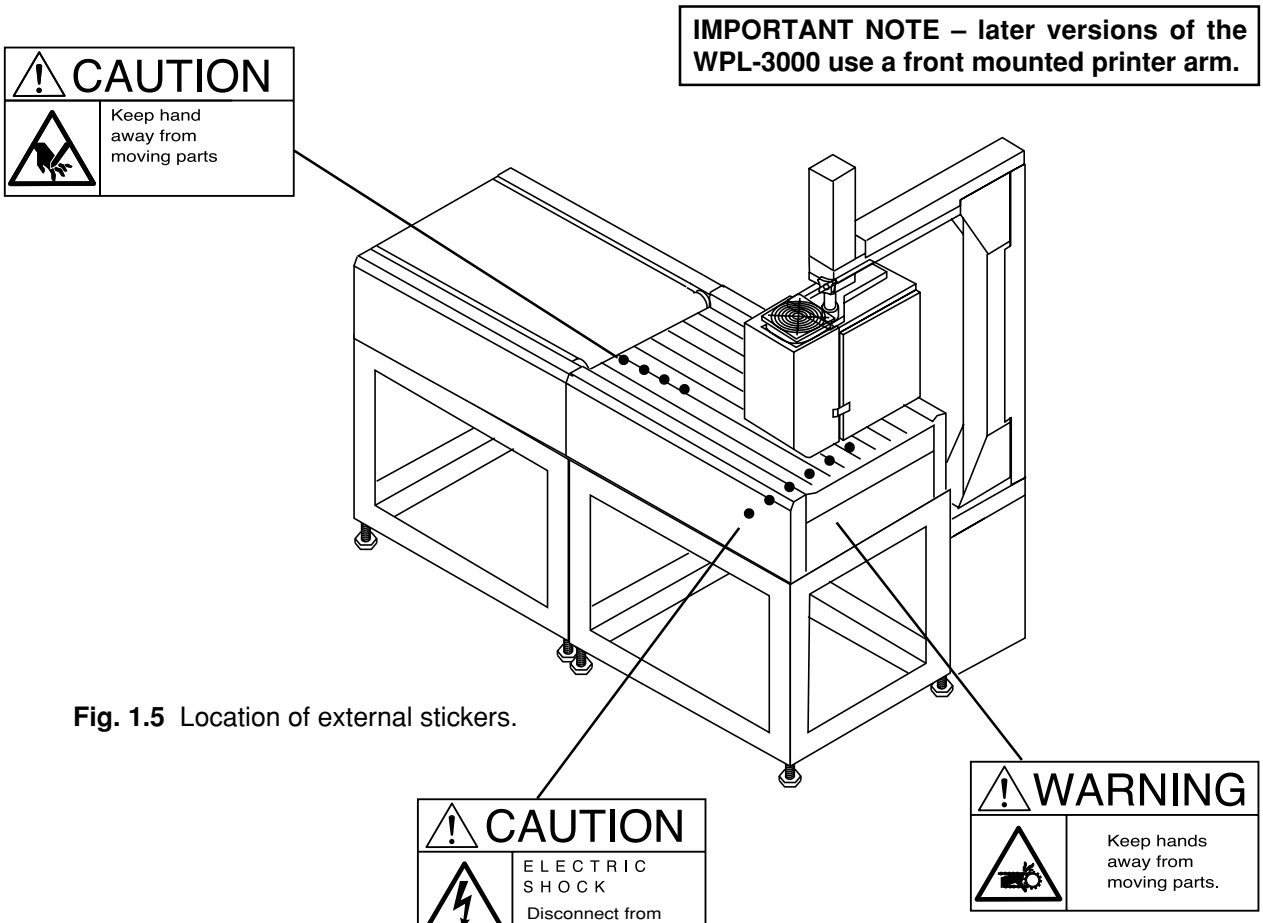

IMPORTANT NOTE – later versions of the WPL-3000 use a front mounted printer arm.
CAUTION
Keep hand away from moving parts
CAUTION
ELECTRIC SHOCK
Disconnect from before opening
WARNING
Keep hands away from moving parts.

Fig. 1.5 Location of external stickers.

Fig. 1.6 Internal safety sticker.

Chapter 2
Setup

2.1 Confirm Before Delivery
- 2.1.1 Location 2-2
- 2.1.2 Installation Route 2-2
- 2.1.3 Electrical Power 2-2
- 2.1.4 Setup Environment 2-2
- 2.1.5 Work Clothes 2-3

2.2 Necessary Items for Installation
- 2.2.1 Tools 2-3
- 2.2.2 Manuals 2-3

2.3 Package Confirmation 2-4

2.4 Positioning and Adjusting Conveyor Stands
- 2.4.1 Fastening to Stand 2-5
- 2.4.2 Fastening Stands 2-6
- 2.4.3 Stand Fastening Method 1 2-7
- 2.4.4 Stand Fastening Method 2 2-7

2.5 Connecting Cable 2-8

2.6 Setup Procedures 2-9

2.7 Method for Threading Labels 2-10

2.8 WPL-3000 USA Rescue Mode 2-11

2.1 CONFIRM BEFORE DELIVERY

2.1.1 Location

Maintain adequate space for setup and maintenance as shown below:

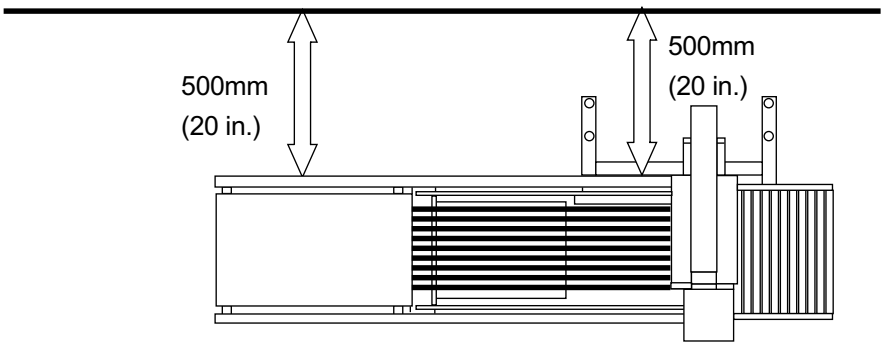


Fig. 2.1 Allow adequate space for WPL-3000.

IMPORTANT NOTE – later versions of the WPL-3000 use a front mounted printer arm.

2.1.2 Installation Route

The WPL is 446mm (17.5 in.) x 1085mm (42.75 in.) and requires an entrance and delivery route wider than 446mm (17.5 in.).
The route should be maintained at all times.

2.1.3 Electrical Power

Electrical voltage as well as electrical plug and standards vary according to country. Always use the appropriate voltage and plug. In addition, noise and voltage changes can affect performance, so connect plug to a dedicated outlet and place in an appropriate environment.

2.1.4 Setup Environment

Installation site should:

1. Be stable and level.
2. Not be exposed to moisture.
3. Not be exposed to direct sunlight for long periods.
4. Not be exposed to wind or strong vibration.
5. Have sufficient area for installation and maintenance.
6. Allow power cord not to be pinched between objects or receive force from other objects.
7. Be connected to an outlet with a circuit breaker capable of detecting short circuits.

2.1.5 Work Clothes

- Care must be taken when working near moving parts.
- Avoid wearing loose clothing that might be caught in the machine.
- Shirt sleeves should be kept buttoned or rolled securely above the elbows.
- To keep fingers or hands from being caught in the conveyor gears or other moving parts, do not wear gloves.
- Ties should be tucked inside shirts.

2.2 NECESSARY ITEMS FOR INSTALLATION

2.2.1 Tools

- Phillips head screwdriver
- Slotted screwdriver
- Monkey wrench (more than 30mm (1 3/16 in.) jaw extension)
- Open-ended wrench (30mm)
- Allen wrench key set (metric)
- Box wrench (7mm, 8mm, 10mm)
- Electrician's pliers
- Level (200 to 250mm (8 to 10 in.))
- IF-21 FD (3.5DD inch floppy disk)

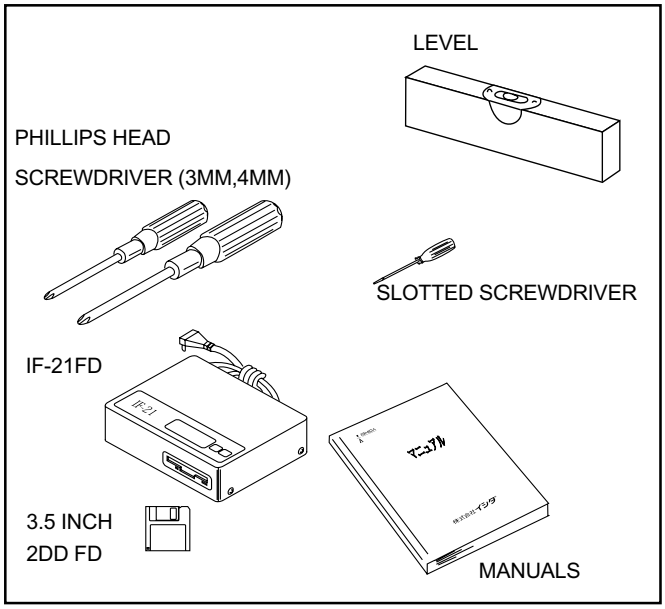


Fig. 2.2 Tools

Note : Use a level with precision greater than 2/1000.

2.2.2 Manuals

- WPL-3000 Service Manual
- WPL-3000 Programming Manual (User's Manual for Managers)
- WPL-3000 Operation Manual (User's Manual for Operators)

2.3 PACKAGE CONFIRMATION

Open carton and inspect contents to see that all items are accounted for and undamaged.

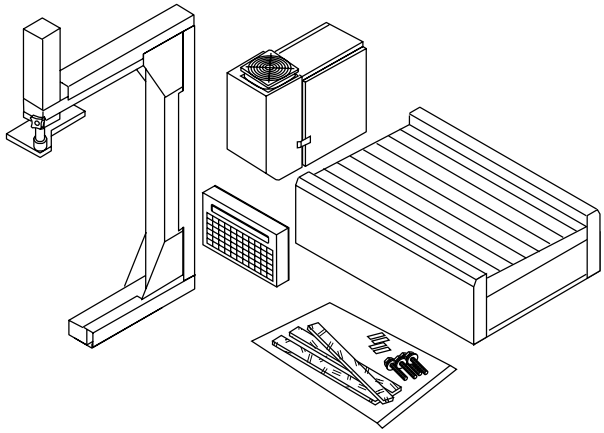


Fig. 2.3 Items contained in carton

IMPORTANT NOTE – later versions of the WPL-3000 use a front mounted printer arm.

Note: Infeed conveyor and stand are options.

2.4 POSITIONING AND ADJUSTING CONVEYOR STANDS

For the WPL-3000 to weigh accurately, it is essential that the machine be level. Should the machine be unlevel or located on an unstable surface, inaccurate measurements, improper product flow, or imprecise labeling may result. To prevent these conditions from occurring, follow the procedures outlined below:

1. Securely fasten each unit to stand. (Reference Section 2.4.1) Using a level, adjust the leveling legs to the desired height. Castors should be set to rise at least 1 cm (3/8 inch) from the ground.

Note: Use a level to set within 2/1000 diagonal on right/left and front / back of weigh platter.

2. Loosely tighten nuts fastening the leveling legs. Confirm that all legs are stable with no movement and tighten down the nuts until tight.

Note: To prevent rust, apply machine grease to legs.

3. Loosely tighten anchor bolts to conveyor stands. Confirm that all legs are stable with no movement and tighten down anchor bolts until bolts are tight.

2.4.1 Fastening to Stand

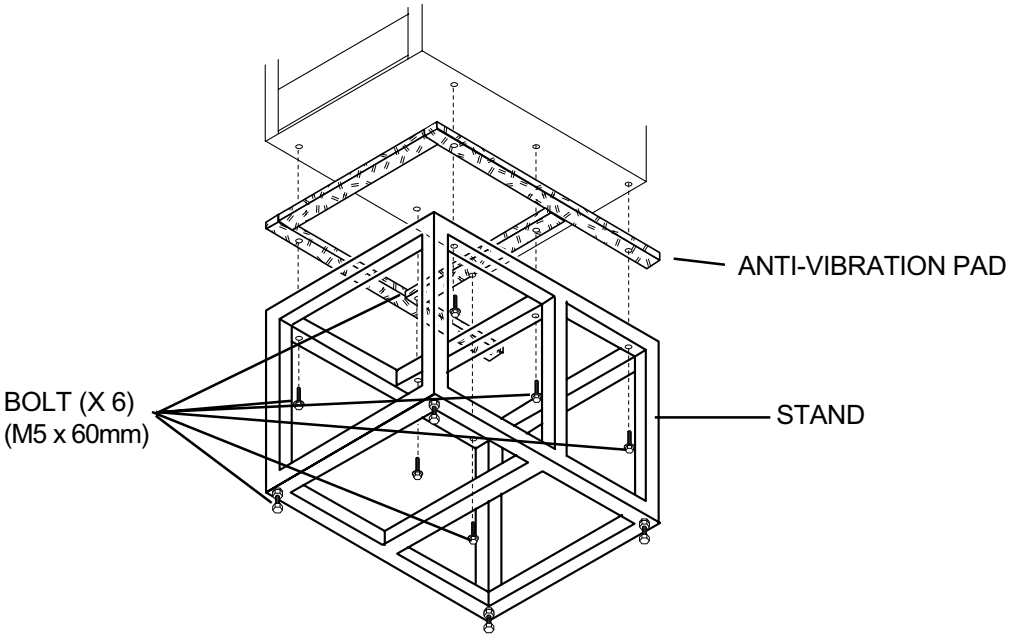


Fig. 2.4 Weigh conveyor unit (under side view)

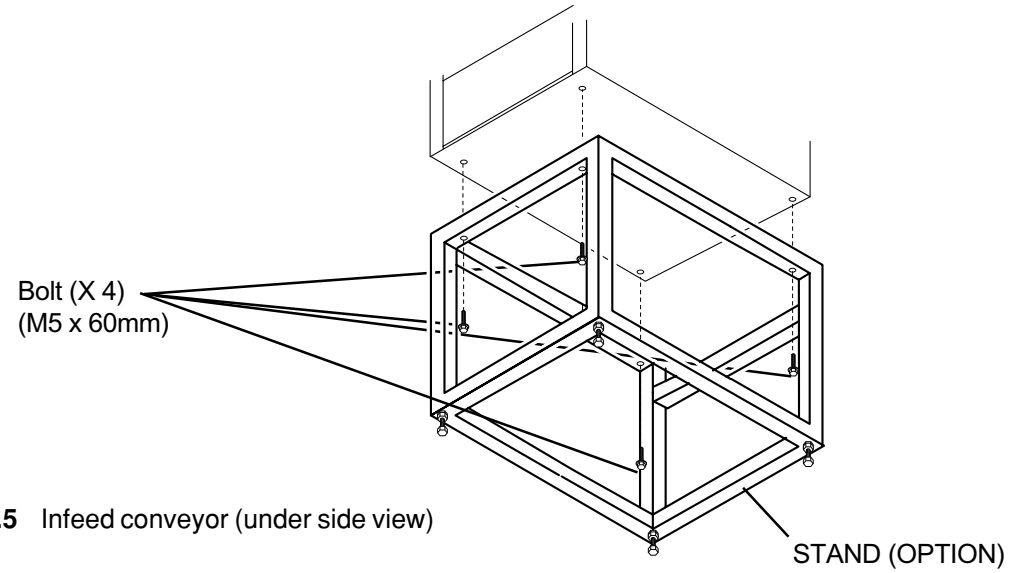


Fig. 2.5 Infeed conveyor (under side view)

2.4.2 Fastening Stands

Secure conveyor stands to floor using anchor bolts.

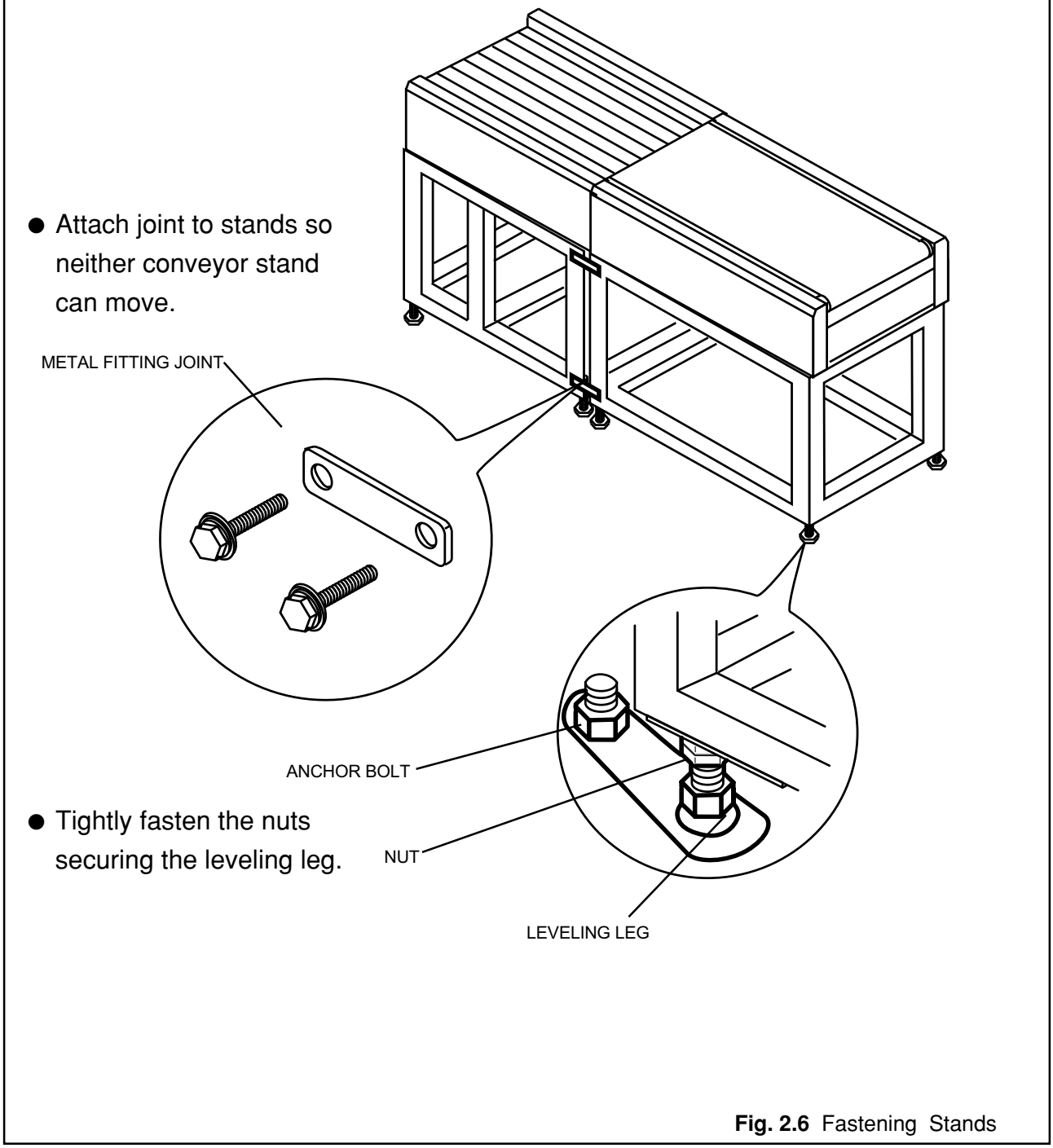

● Attach joint to stands so neither conveyor stand can move.
METAL FITTING JOINT
ANCHOR BOLT
● Tightly fasten the nuts securing the leveling leg.
NUT
LEVELING LEG

Fig. 2.6 Fastening Stands

2.4.3 Stand Fastening Method 1

Fasten stand to floor.

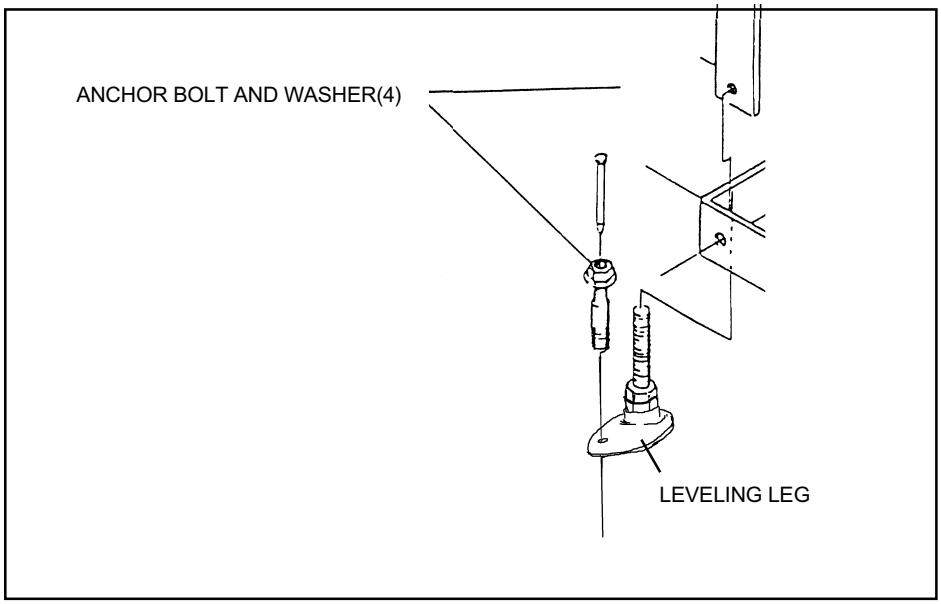


Fig. 2. 7 Method 1

2.4.4 Stand Fastening Method 2

Fasten anchor bolt and leveling leg to anchor plate

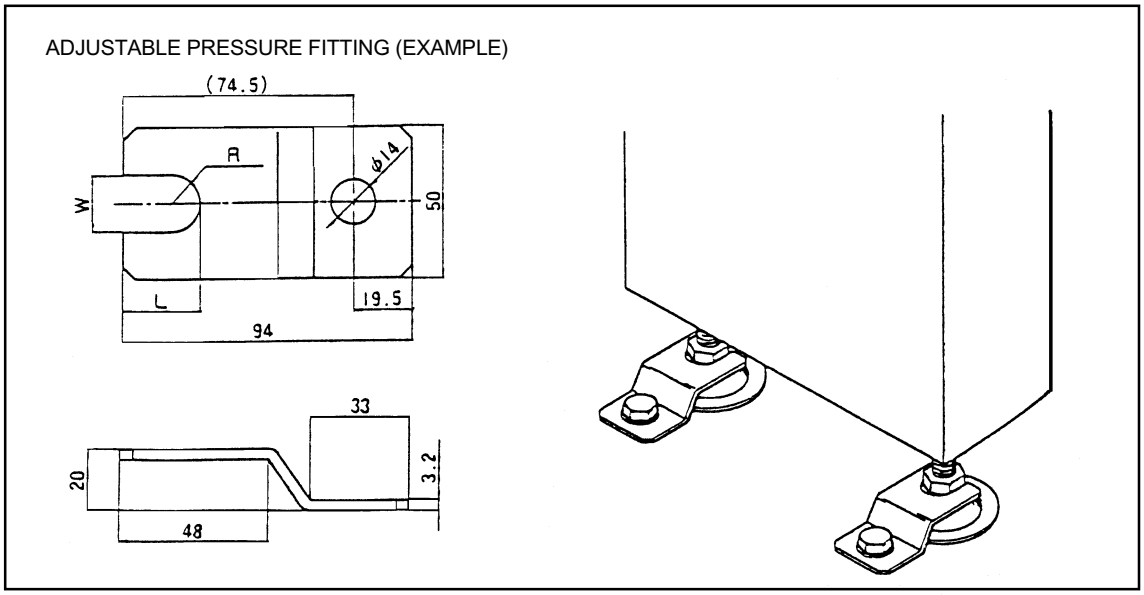


Fig. 2. 8 Method 2

2.5 CONNECTING CABLE

Connect each cable as shown below. Tie up and secure excess printer cable.

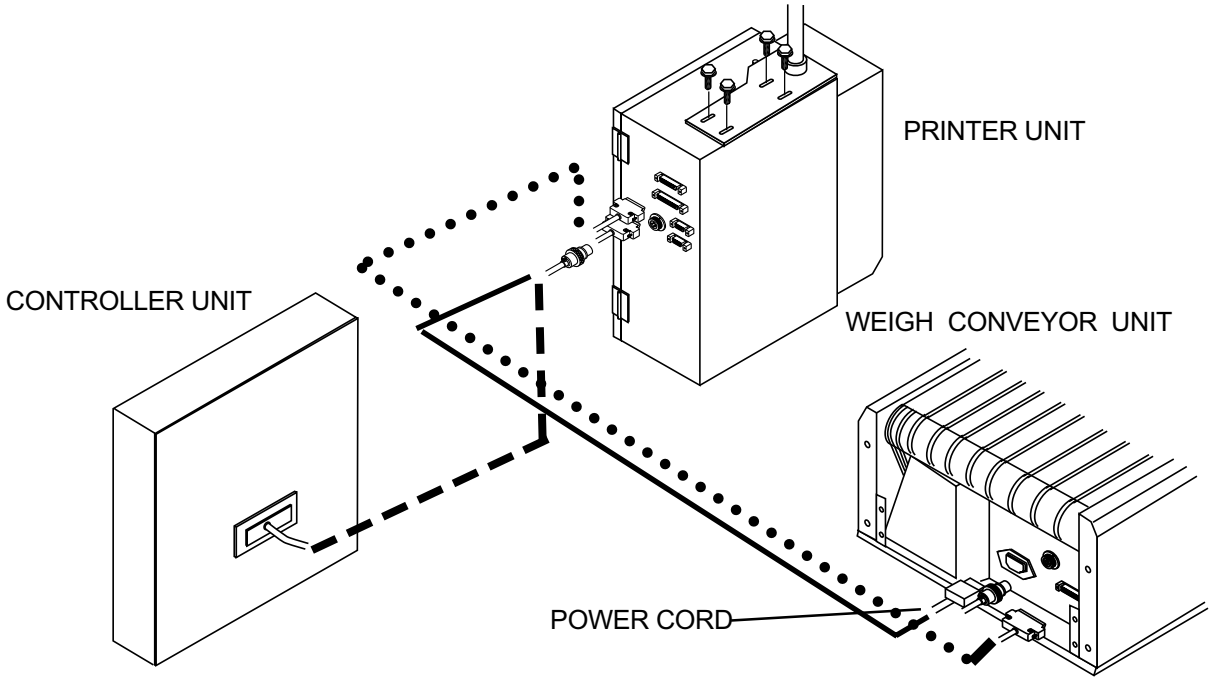
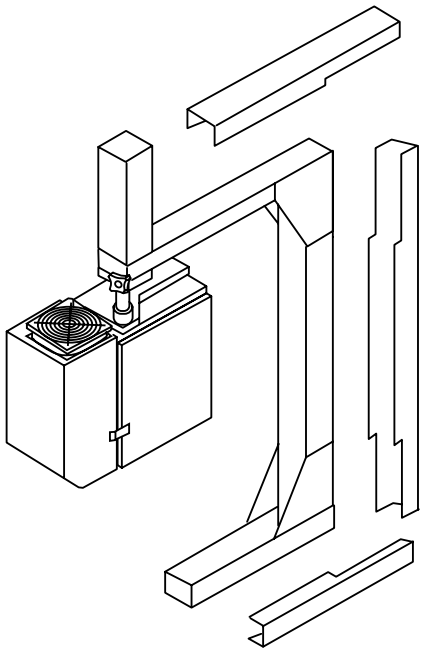


Fig. 2.9 Connecting Cable



TIE UP AND SECURE EXCESS PRINTER CABLE AND FASTEN COVERS WITH SCREWS.

IMPORTANT NOTE:
Later versions of the WPL-3000 use a front mounted printer arm.

Fig. 2.10 Printer Stand Case

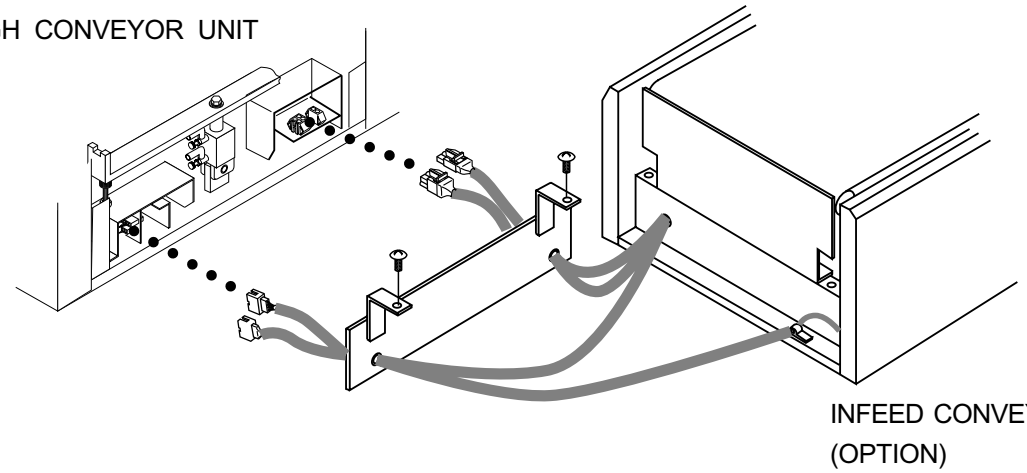


Fig. 2.11 Connecting Cable

2.6 SETUP PROCEDURES

Refer to Appendix A.1 Installation Notes for more information.

1. Performing RAM Clear

Insert electrical plug into electrical outlet. Refer to ***Test Mode 2: RAM CLEAR*** in this manual section 3.2.3 and perform initialization of all RAM data.

2. Formatting Label

Print Format Setting: Refer to ***Test Mode 7: LABEL FORMAT***, section 3.2.8.

Label Length Setting: Refer to ***Setting Mode 1: LABEL FORMAT***, section 4.2.1.

3. Registering Date and Time

This is performed in registration mode.

Refer to ***Programming Manual***.

4. Program PLU file.

This is performed in registration mode.

Refer to ***Programming Manual***.

5. Making Test Print

Thread labels and confirm that printing is normal. Refer to ***Test Mode 3: THERMAL HEAD***, section 3.2.4.

6. Performing Total Clear

Refer to ***Programming Manual***.

7. Backing Up Data

Back up registered data to a floppy disk. Refer to ***Test Mode 99: DATA SAVE/LOAD***, section 3.2.13.

2.7 METHOD FOR THREADING LABELS

Thread labels as shown below. For a detailed explanation of threading the label reel, refer to ***Operation Manual***.

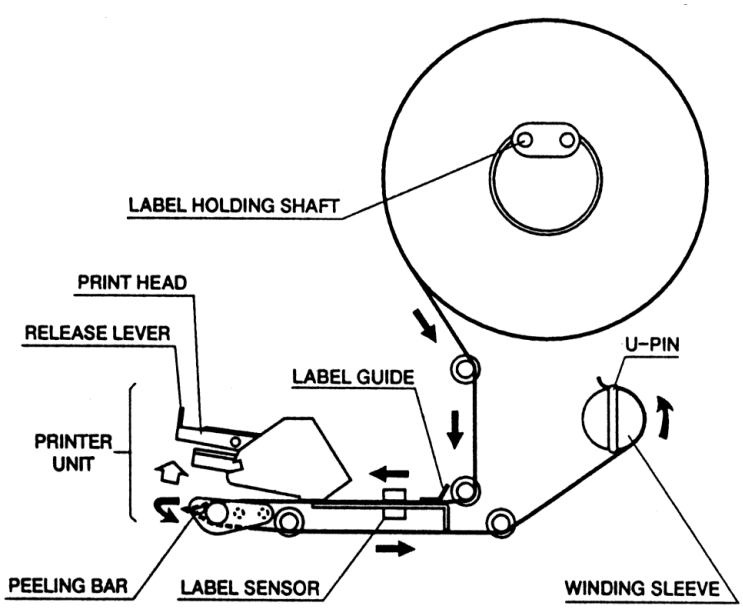


Fig. 2.11 Arrows indicate thread direction.

2.8 WPL-3000 USA RESCUE MODE

When the address and store name have been changed, there is a possibility that the registered data is greater than the allocated space on the label. As a result, a hitch can develop when starting in standard mode. To eliminate this problem, it is necessary to either delete the data or correct the data responsible for this hitch.

When WPL-3000 cannot enter standard mode after power is turned ON, the machine cannot enter setting or registration mode.

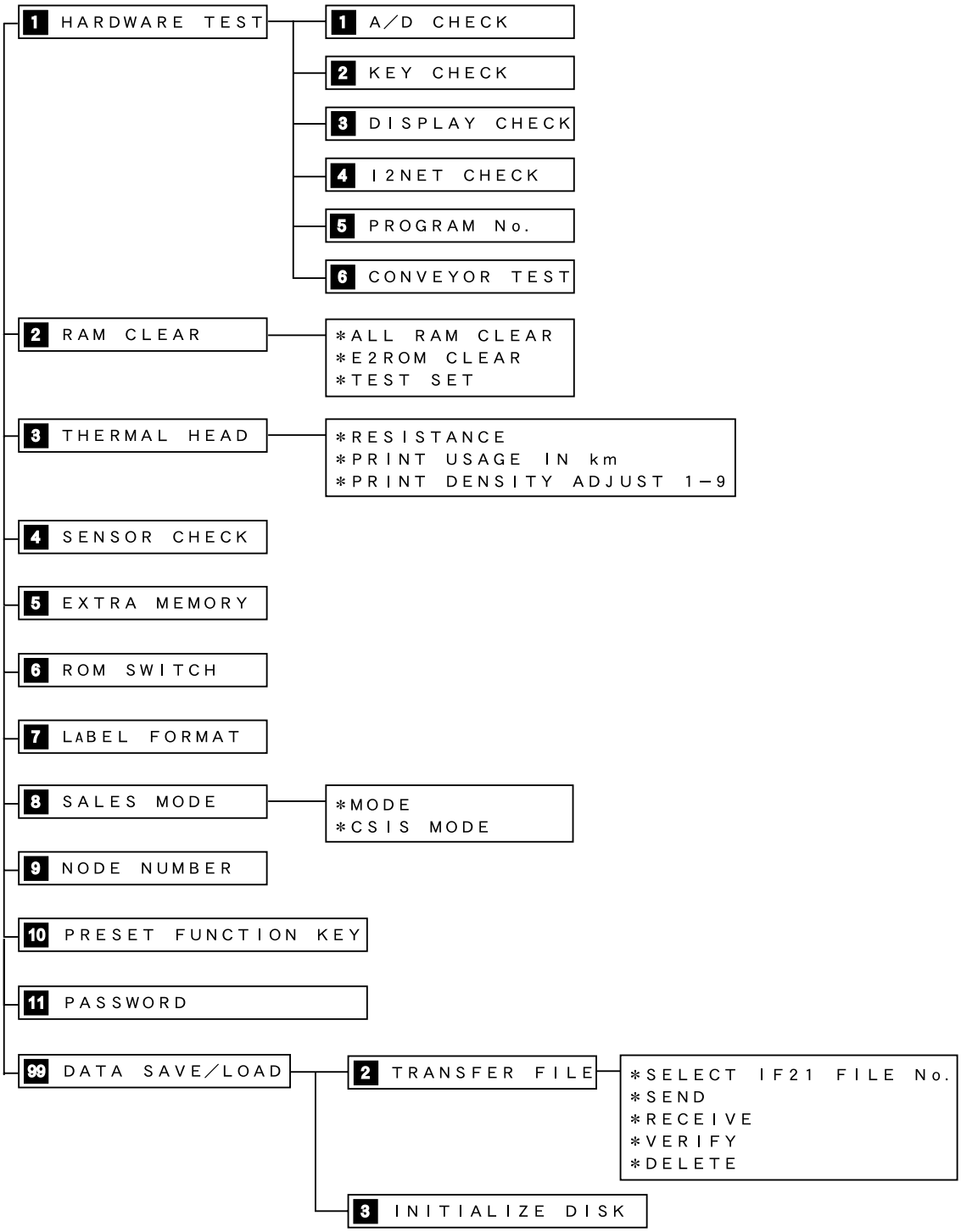
For these situations when the machine does not enter standard mode after starting, it is necessary to use Rescue Mode. Rescue Mode by-passes standard mode to enter another mode.

1) With the HELP key pressed, turn ON the machine.
2) Rescue Mode appears after the display check sequence.
3) In Rescue Mode, the Registration Menu and Setup Menu may be accessed by using the appropriate password followed by [MODE].
4) When the temporary process is complete, turn OFF power and restart.
5) Machine should enter standard mode.

Chapter 3
Test Mode

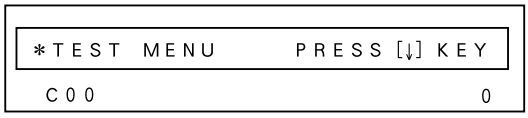
3.1 Menu Directory Diagram 3-2
3.2 Test Mode
3.2.1 Starting Test mode 3-3
3.2.2 Hardware Test (C01). 3-3
3.2.3 RAM Clear (C02) 3-6
3.2.4 Thermal Head Setting (C03) 3-7
3.2.5 Sensor Check (C04) 3-9
3.2.6 Extra Memory (C05) 3-9
3.2.7 Setting ROM Switch (C06) 3-9
3.2.8 Label Format Editing (C07) 3-12
3.2.9 Sales Mode Setting (C08) 3-12
3.2.10 Machine ID No. Setting (C09) 3-13
3.2.11 Preset Function Setting (C10) 3-14
3.2.12 Password (C11) 3-14
3.2.13 Data Transmission (C99) 3-15

3.1 MENU DIRECTORY DIAGRAM



3.2 TEST MODE

3.2.1 Starting Test Mode



To enter test mode, turn off the machine and restart while pressing any key excluding (RESET) to enter test mode. When test mode appears on screen, release the pressed key.
Use (↓) to scroll through the menu choices or enter corresponding menu number and press (↓) to jump to desired test mode operation.
Use (ENTER) to select test mode operation or enter menu number and press (ENTER) to select test mode operation directly.

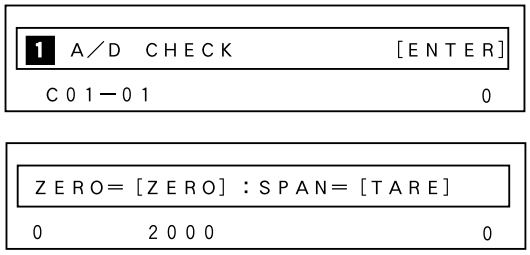
3.2.2 Hardware Test (CO1)

The following hardware items are checked in this test mode operation.

1. A/D Converter Check
2. Key Check
3. Display Check (Dot and digital fluorescent display)
4. I²NET Communication Check
5. Displaying Program Number
6. Conveyor Elevator and Label Applicator Test

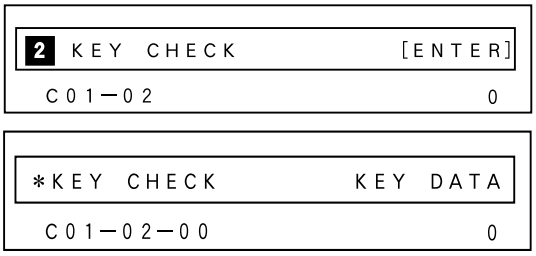
A/D Converter Check (C01-01)

See Section 10.3 for calibration procedure.



Key Check (C01-02)

Operation of all 120 keys on the keyboard can be checked in this mode.



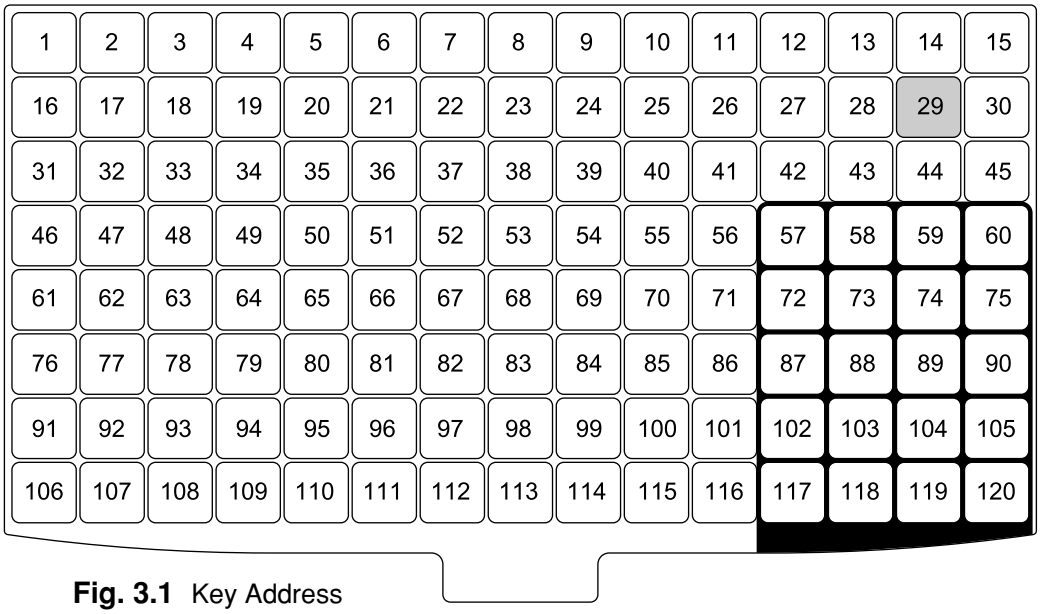


Fig. 3.1 Key Address

Note 1): If any keys do not work, check cable connections at the buzzer board located inside the keyboard/display unit. Also check connections at the printer unit.

2): Once the membrane keyboard has been removed, it **cannot** be reused.

CAUTION

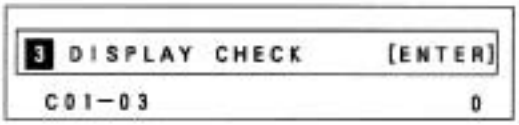
Key 29= RESET key

When RESET key is pressed, the display returns to sub-menu.

- When each key is pressed, the numerical value is displayed as shown in the above illustration.

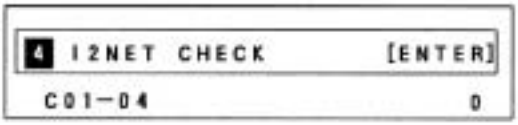
Display Check (C01-03)

This mode tests the dot fluorescent display and digital fluorescent display operation by lighting both displays to indicate normal condition. Press [ENTER] to start display check. Press [END] to exit display check.

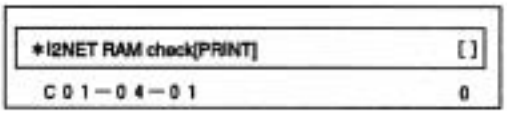


I² NET Check (C01-04)

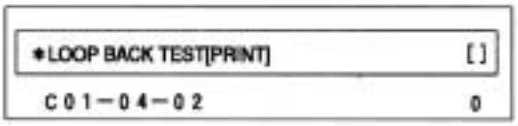
This test confirms whether I² NET circuitry is working properly.



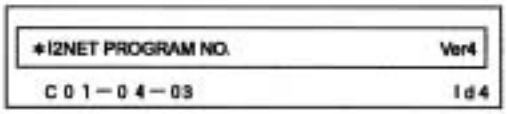
1. I²NET RAM check (C01-04-01)
   This performs RAM check of internal communications chip between scales. Press [PRINT] to start test. OK is displayed after self-test is complete.



2. Loop Back Test (C01-04-02)
   This tests the transceiver (driver and receiver). Press [PRINT] to start test. OK is displayed after self-test is complete.



3. I²NET Program No. Display (C01-04-03)
   This displays the program version of the I²NET circuitry.

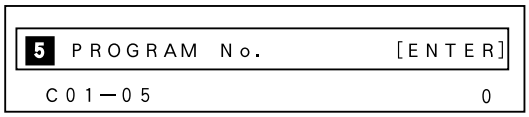


- Press [END] to exit I²NET check.

Program No. Display (C01-05)

This displays program number and program version of ROM on main board.

Press ⇩ to display FONT program number and version.



Conveyor Elevator and Applicator Test (C01-06)

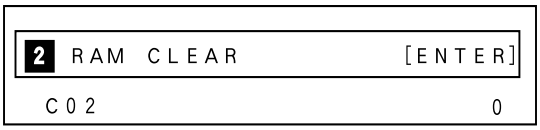
This tests the label application arm operation and weigh conveyor elevator.

- Press PRINT to test the label applicator's movement.
- Press PLU to test the conveyor's up and down movement.

Note: Compressed air must be supplied for these movement tests.

3.2.3 RAM Clear (C02)

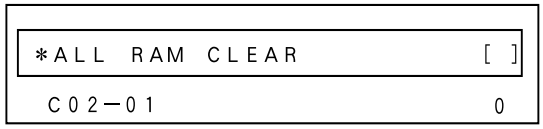
This initializes (clears) RAM, E^2ROM and sets Test PLU data.



All RAM Clear (C02-01)

This clears all RAM data.
Press ZERO twice to start clearing RAM.
"OK" is displayed after RAM has cleared and self-checked.

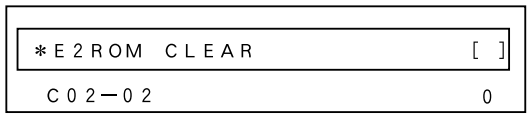
Note: RAM data consists of all information programmed in the Registration Menu.



E²ROM Clear (C02-02)

This resets all E²ROM data to default values.
Press ZERO twice to start clearing E²ROM.
"OK" is displayed after E²ROM has been reset and self-checked.

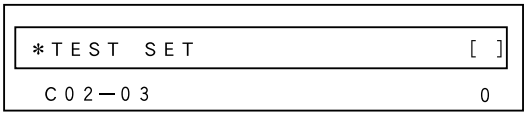
Note: E²ROM data consists of all configuration information programmed in the Setup Menu and Test Menu.



Setting Test Data (C02-03)

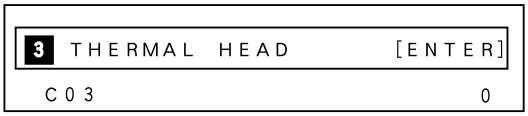
Set test data after performing RAM Clear and E²ROM Clear.
Press ZERO twice to set test data.
"OK" is displayed after test data has been successfully set.

Note: This operation is the same as step C02-01 (RAM clear) and step C02-02 (E²ROM clear) plus test PLU's 1 through 10 are created along with a dummy shop name.



3.2.4 Thermal Head Setting (C03)

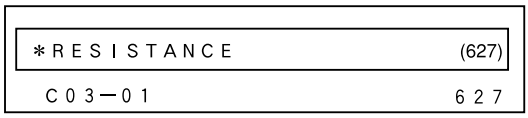
Use this step to set the Thermal Head resistance, check or reset usage, and set print density.



Setting Thermal Head Resistance Value (C03-01)

Set the thermal head resistance value according to the table below. Refer to the value written on the underside of the thermal print head.

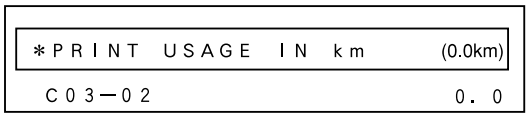
Note: Press [→] to automatically set the thermal head resistance value.



Resistance Value	Entry Value
528 ~ 545	537
546 ~ 563	555
564 ~ 581	573
582 ~ 600	591
601 ~ 618	609
619 ~ 636	627
637 ~ 654	645
655 ~ 672	663

Print Usage Display (C03-02)

This shows the length in kilometers of label stock that has been issued. This operation can also clear print usage length. Enter [0] and press [ENTER] to clear print usage distance. Always clear this setting when a new thermal head is installed.



Print Density Setting (C03-03)

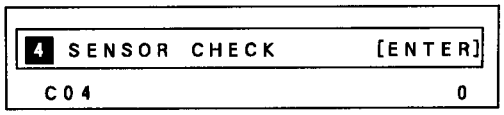
This adjusts print density (1: light to 9: dark).

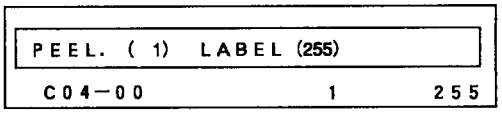
Press [PRINT] to issue test labels.

3.2.5 Sensor Check (C04)

This confirms that the peel and label sensors are operating.

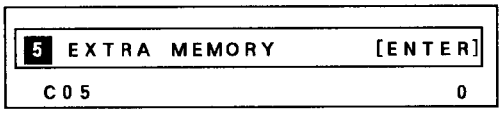
- The peeling sensor detects if a label is on the applicator. It reads a low value when open and a high value when blocked. There is no adjustment for these values.
- The label sensor reads the gap between labels. It reads a low value when blocked and a high value when open. See Section 7.3.1 for adjustment procedures.

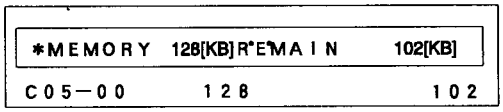




3.2.6 Extra Memory (C05)

This displays initial memory amount and remaining available memory on the main board.



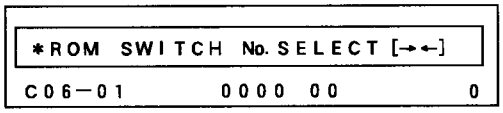


3.2.7 Setting ROM Switch (C06)

This sets the ROM switch values which determine machine operation.

Press (→) to select the ROM switch address number. Enter the desired value then press (ENTER).

Refer to the list on the following pages to set ROM switch values.



ROM Switch List
Test Menu 6: ROM SWITCH

Move to the desired address using the (→) key.
Input the new data then press (ENTER).

Function Name	ROM Address	Default Value
Temporary date change type 00 = Pack (and Expire), 01 = Expire only	0013	00
FEED key function 00 = blank label, 01 = reissue last label	0015	00
VOID key function 00 = no label, 01 = print Void label	0016	00
Flashing message timer (seconds) 00 ~ 99 (HEX)	0017	60
Selection of Unit Pricing 00 = $/kg, 01 = $/100g and lb. (USA)	001D	01
Computer communications speed 00, 03 = 9600 baud, 01 = 2400 baud, 02 = 4800 baud, 04 = 19200 baud	0026	00
Answer wait time for PC 01 = 1.5 msec	0028	30
RESET key operation 00 = Enable, 01 = Disable	0029	00
Receive to transmit turn around timer 01 = 1.5 msec	002A	00
Decimal Point Position, Total Price. Position from right (01 = no decimal point)	002C	03
Decimal Point Position, Weight. Position from right (01 = no decimal point)	002D	03
Decimal Point Position, Unit Price. Position from right (01 = no decimal point)	002E	03
Second Nutrition Label (Label Format 1) 00 = None, 01 = Short, 02 = Long	0030	01
Second Nutrition Label (Label Format 2) 00 = None, 01 = Short, 02 = Long	0031	02
Second Nutrition Label (Label Format 3) 00 = None, 01 = Short, 02 = Long	0032	01
Second Nutrition Label (Label Format 4) 00 = None, 01 = Short, 02 = Long	0033	02
Second Nutrition Label (Label Format 5) 00 = None, 01 = Short, 02 = Long	0034	01
Second Nutrition Label (Label Format 6) 00 = None, 01 = Short, 02 = Long	0035	02
WPL Conveyor "Time Out" 00 = No, Conveyor runs continuously. 01 = Yes, Stop after 10 minutes of non-use.	0039	00

ROM Switch List
Test Menu 6: ROM SWITCH

Function Name	ROM Address	Default Value
WPL Configuration 00 = Straight through (In-Line). 01 = “L” shape.	003A	01
Shelf Life 00 = Today counted as one day. 01 = Today not counted (add one day to shelf life).	003B	00
Stabilization Lock Count Number of weight samples that must match before weight reading is accepted. **Note:** Decrease value for faster operation.	003C*	04
A/D Conversion Speed 01 = Slow: slower throughput, most reliable. 02 = Medium: standard. 03 = Fast: fastest throughput.	003D*	02
Width of Stabilization Window Difference in number of internal counts from previous sample that will be accepted as the same weight. *Example:* 02 = ±2 count difference from last sample. **Note:** Increase value for faster operation.	003E*	02

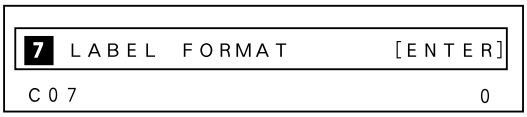
* These changes must be registered to the A/D Board NV RAM. See WPL-3000 setup instructions (Appendix A.1).

* Typical “Speed Up” settings are: 003C = 03, 003D = 03, and 003E = 03.

3.2.8 Label Format Editing (C07)

This is used to edit label formats.

There are seven default label formats (1 to 7). See Section 4.2.1.



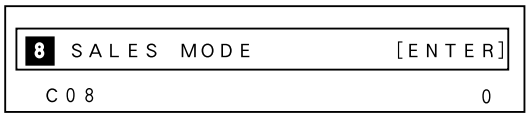
PRINT FIELD NUMBER COORDINATE POSITON

1. Enter the label format number (1-7), then press (PLU).
2. Select X or Y coordinate using (→).
3. Select Print Field numbers using (↑) or (↓).
4. Enter the new coordinate value, then press (ENTER).
5. Press (PRINT) to print a test label.
6. Press (END) to return to the main Test Menu.

Note: Refer to Appendix A2 for worksheets of all default label formats.

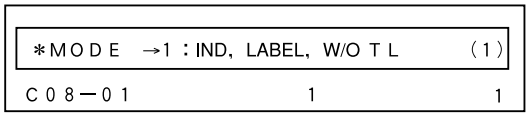
3.2.9 Sales Mode Setting (C08)

This is used to set sales and CSIS modes.



Sales Mode (C08-01)

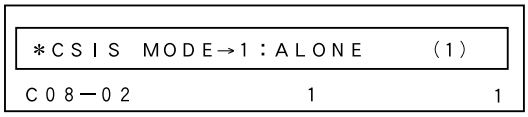
This selects machine functions corresponding to customer sales configuration.



Dot Display	
1 : IND, LABEL, W/O TL	Standard issue of individual lablels without operators
2 : OPE, W TOTAL	Enable operator functions

CSIS Mode (C08-02)

This selects either stand alone or CSIS mode.



Entry	CSIS Mode	Condition
1	ALONE	Used for stand alone.
2	MASTER SCALE	Used for setting as a master scale. See caution below.
3	SATELLITE SCALE	Used for satellite scales.

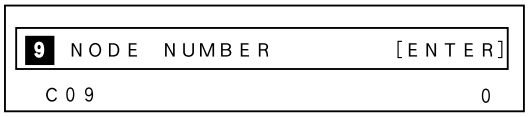
Note: Refer to AC-3000 System Setup Manual for details of configuring a scale communication network.

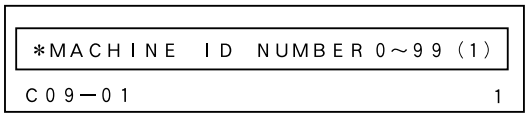
CAUTION MSCU3000 option is necessary for MASTER SCALE.

3.2.10 Machine ID No. Setting (C09)

This sets the Master Scale's ID number for computer communications.

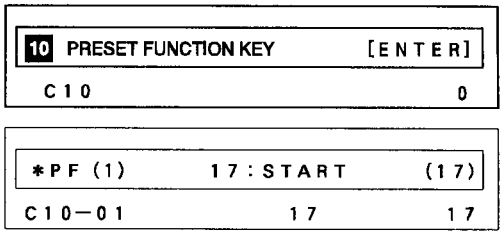
Note: The maximum number of Master Scale connections to the computer may vary depending on the efficiency of the level converters used.





3.2.11 Preset Function Setting (C10)

This programs functions for each function key PF (1) to PF (4).
Use ↓ to select PF setting (1)-(4).
Enter the number corresponding to the desired function then press ENTER.



Preset Function Key Locations

PF(1)	
PF(2)	
PF(3)	PF(4)
DATE	X MULTIPLY

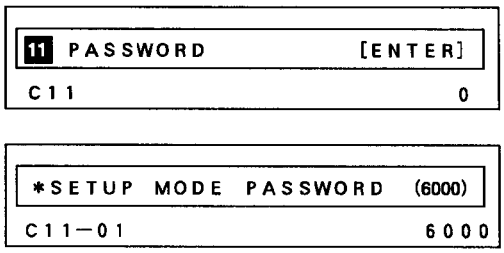
No.	Function Key	Function
0	*	Temporary display of time + date.
1	LOGO	Calls up logo (option).
2	MESSAGE	Calls up extra text message.
3	STORE	Select store name 1 to 9.
4	COUPON	Calls up coupon message.
5	POP	Calls up POP graphic message.
6	FIX PRICE	Sets fixed price.
7	DISCOUNT	Sets special price.
8	–$	Sets discount amount.
9	–%	Sets percentage discount.
10	FIX WGT.	Sets fixed weight value.
11	LABEL	Switches label style.
12	TARGET QTY	Sets target quantity.
13	TARGET PRICE	Sets target price.
14	TARGET WEIGHT	Sets target weight.
15	OPERATOR	Enter operator ID number.
16	ADD	Select if totals are accumulated.
17	START	Starts conveyor.
18	STOP	Stops conveyor.
19	ROTATE	Apply label to leading or trailing corner.
20	TRAY	Activates tray call up.
21	UPPER	Sets upper weight check limit.
22	LOWER	Sets lower weight check limit.
23	BARCODE	Selects printing/no printing of barcode.

Note: Default settings are PF(1)=START, PF(2)=STOP, PF(3)=LOWER LIMIT, PF(4)=TARGET QTY

3.2.12 Password (C11)

Use to change the Setup Menu password from the default value of 6000.

Enter a one to four digit number then press ENTER.



3.2.13 Data Transmission (C99)

This allows memory data to be copied to a floppy disk when IF-21FD backup tool is connected.Transferring data from a floppy disk back to WPL-3000 is also possible.

CAUTION Before transferring the data by IF-21 FD, check the cable connecting WPL-3000 and IF-21 FD. Before the cable is connected, both machine and floppy drive should be turned off.

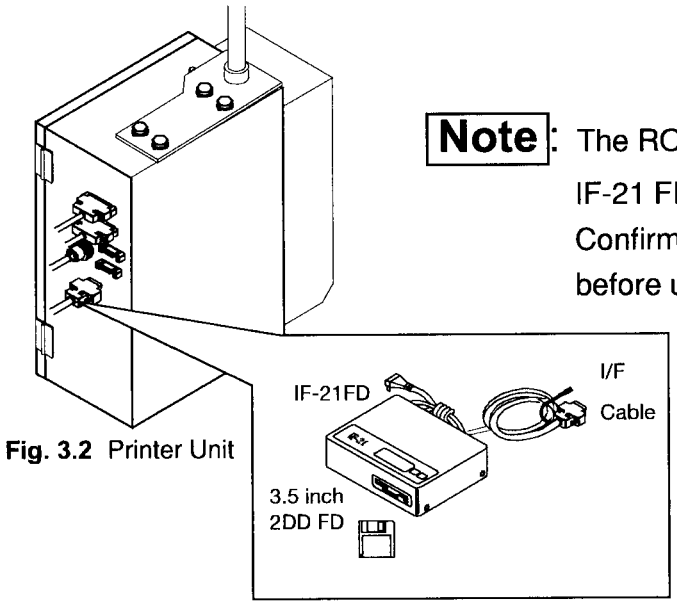


Fig. 3.2 Printer Unit

Note: The ROM program version for the IF-21 FD is **J-209N** or later. Confirm that the ROM version is correct before using.

CAUTION Use the 9-pin cable provided with the IF-21FD.

Note: Confirm only switches 2 and 5 are down before turning the IF-21FD on.

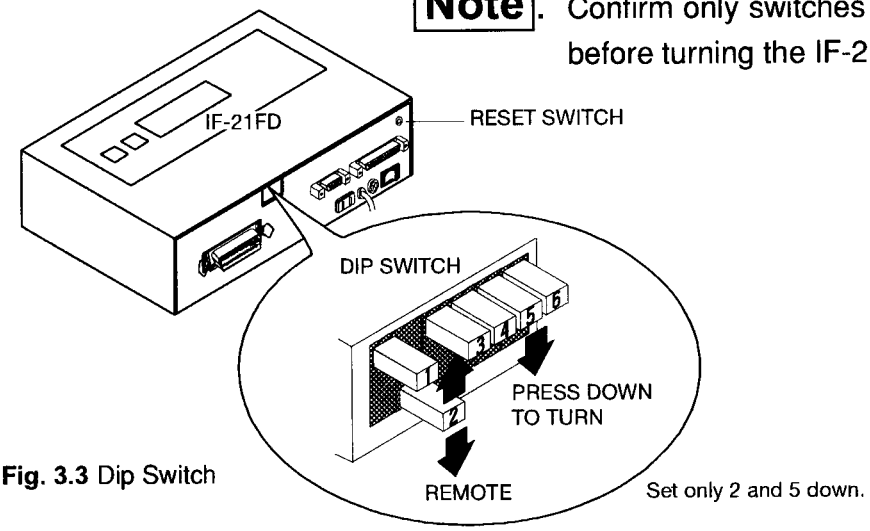


Fig. 3.3 Dip Switch

CAUTION Before using a new floppy disk for the first time, perform Step C99-03 to format the disk. Use 2DD type disks only.

All IF-21FD operations are controlled from the WPL-3000.

3.2.13.1 Data Transfer

Select IF21 File No. (C99-02-01). Enter the IF-21FD file number (1~8) to be used, then press (ENTER).

Send (C99-02-02)

This sends data from WPL-3000 to IF-21FD.

Enter selection number of the data to be sent and press (ENTER).

Press (PRINT) to begin sending.

Note: Select number using (→) key.

SELECTION NO.	TRANSMISSION TYPE
1	ALL FILE
2	MASTER FILE
3	E2ROM FILE

Receive (C99-02-03)

This receives data from IF-21FD to WPL-3000.

Enter selection number of the data to be received and press (ENTER).

Press (PRINT) to begin receiving.

Note: Select number using (→) key.

Note:
1. Master File contains all data programmed in Registration Mode. E²ROM File contains all configuration setting changes made in Setup and Test Modes.
2. Master File contains file numbers 4-9 and 12-21.
3. E²ROM file contains file numbers 10 (Label Format) and 11 (Setup File).

IMPORTANT: When upgrading firmware or transferring files from one model to another, **DO NOT** load **11: SETUP FILE**. This file is incompatible and will cause unintended configuration settings.

SELECTION NO.	TRANSMISSION TYPE
1	ALL FILE
2	MASTER FILE
3	E2ROM FILE
4	ITEM MASTER
5	STORE MASTER
6	COUPON MASTER
7	MESSAGE MASTER
8	OPERATOR
9	PRESET KEY
10	LABEL FORMAT
11	SETUP FILE
12	AD MESSAGE
13	TAX MASTER
14	TITLE FILE
15	DEPARTMENT
16	GROUP
17	CAMPAIGN MASTER
18	BATCH FILE
19	---
20	SUB TOTAL
21	NUTRITION FILE

Verify (C99-02-04)

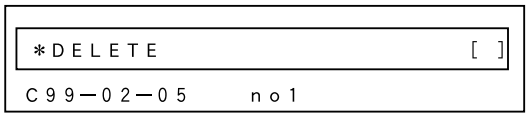
This verifies WPL-3000 and IF-21FD data. Enter the selection number of the data to be verified and press [ENTER]. Press [PRINT] to begin verifying.

Note: Select number using [→] key.

SELECTION NO.	FILE FOR VERIFICATION
1	ALL FILE
2	MASTER FILE
3	E2ROM FILE
4	ITEM MASTER
5	STORE MASTER
6	COUPON MASTER
7	MESSAGE MASTER
8	OPERATOR
9	PRESET KEY
10	LABEL FORMAT
11	SETUP FILE
12	AD MESSAGE
13	TAX MASTER
14	TITLE FILE
15	DEPARTMENT
16	GROUP
17	CAMPAIGN MASTER
18	BATCH FILE
19	---
20	SUB TOTAL
21	NUTRITION FILE

Delete (C99-02-05)

This deletes the file selected in step C99-02-01 from the IF-21FD disk.
Press ZERO twice to delete the file.



3.2.13.2 Disk Formatting

Initialize Disk (C99-03)

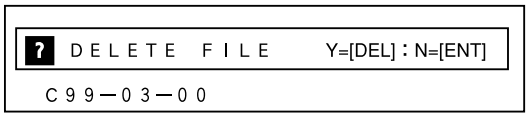
This formats the 2DD floppy disk.

Note: Before a disk is used for the first time it must be formatted.

CAUTION:
When a floppy disk is initialized, all contents of the floppy disk are deleted.

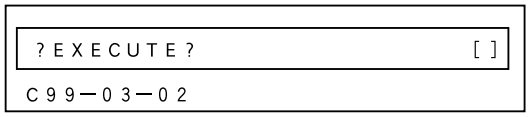
Delete File (C99-03-00)

This initializes all data contained on floppy disk.
Press CHAR DELETE to begin deleting file. Press any key other than CHAR DELETE to cancel delete.



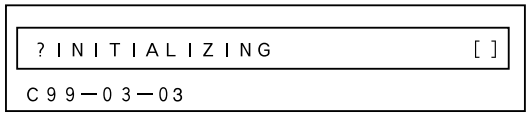
Execute? (C99-03-02)

Press CHAR DELETE again to confirm and begin execution. Press any key other than CHAR DELETE to cancel execution.



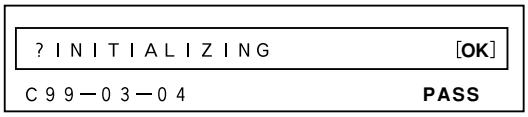
Executing (C99-03-03)

Executing.



Initialization Complete (C99-03-04)

Initialization is complete when “OK” is displayed .



Note: See Error Code list in Section 9.3 (Save & Load with IF-21FD Floppy Disk Unit) if necessary.

Chapter 4
Setting Mode

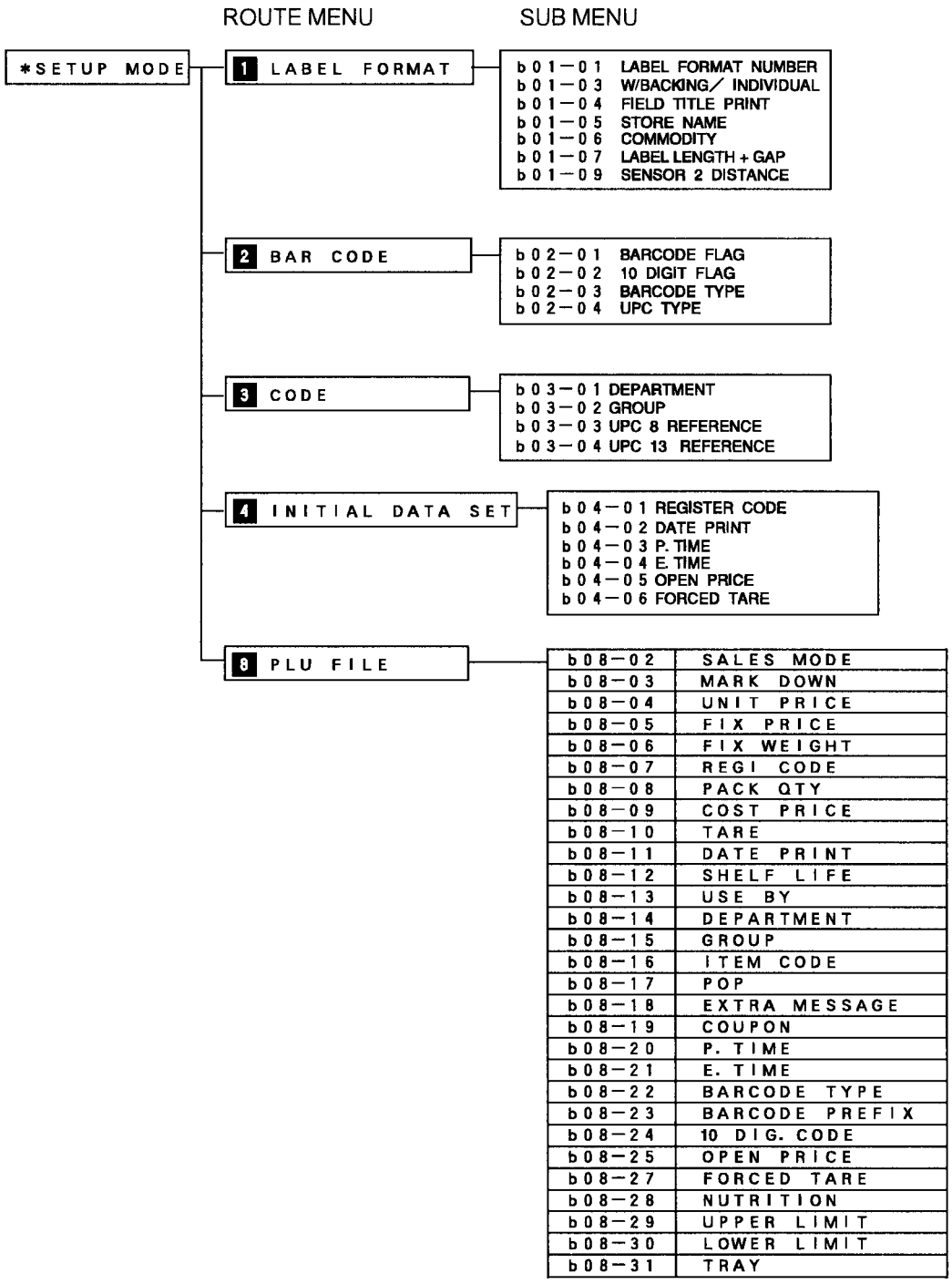
4.1 Menu Directory Diagram..... 4-2
4.2 Setup Mode
4.2.1 Label Format (b01)..... 4-5
4.2.2 Bar Code Setting (b02)..... 4-7
4.2.3 Code Settings (b03)..... 4-8
4.2.4 Setting Initial Data (b04)..... 4-9
4.2.5 PLU File (b08)..... 4-11
4.2.6 Preset Report (b10)..... 4-12
4.2.7 Registration Select (b11)..... 4-14
4.2.8 Total Mode Select (b12)..... 4-15
4.2.9 Password (b13)..... 4-15
4.2.10 Tray Master Registration (b15)..... 4-16
4.2.11 Conveyor Setup (b16)..... 4-17

4.1 MENU DIRECTORY DIAGRAM

Setting mode is used to adjust the machine to the needs of the customer. For this reason, a clear understanding of setting mode is needed before beginning operation.

Enter Setting mode using password 6000, followed by the MODE key.

Note that the password may be changed in Test mode C11 (Section 3.2.12).



ROUTE MENU

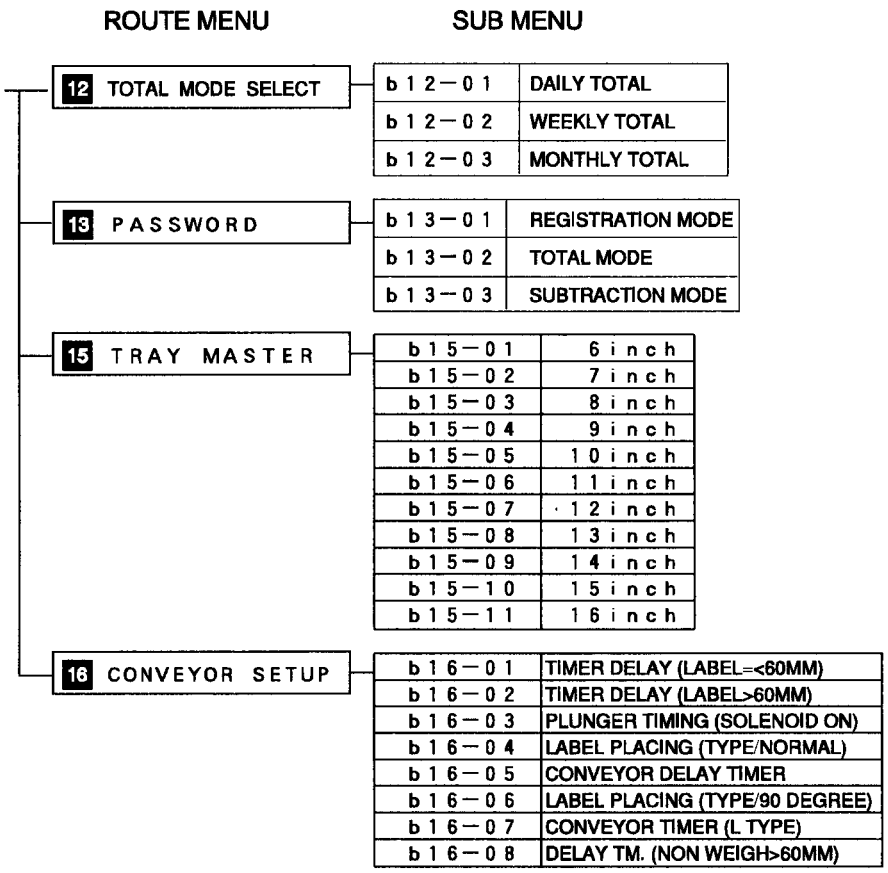
10 PRESET REPORT

SUB MENU

b 1 0 — 0 1	DAILY SALES TOTAL	b 1 0 — 2 8	DAILY OPERATOR TOTAL
b 1 0 — 0 2	DAILY MACHINE TOTAL	b 1 0 — 2 9	WEEKLY SALES TOTAL
b 1 0 — 0 3	DAILY ITEM(ITEM)	b 1 0 — 3 0	WEEKLY MACHINE TOTAL
b 1 0 — 0 4	DAILY ITEM(ITEM) PRICE ABC	b 1 0 — 3 1	WEEKLY ITEM(ITEM)
b 1 0 — 0 5	DAILY ITEM(ITEM)WEIGHTABC	b 1 0 — 3 2	WEEKLY ITEM(ITEM) PR.ABC
b 1 0 — 0 6	DAILY ITEM(ITEM) COUNT ABC	b 1 0 — 3 3	WEEKLY ITEM(ITEM) WT.ABC
b 1 0 — 0 7	DAILY ITEM(ITEM) PRICE Z	b 1 0 — 3 4	WEEKLY ITEM(ITEM) CT.ABC
b 1 0 — 0 8	DAILY ITEM(ITEM) WEIGHT Z	b 1 0 — 3 5	WEEKLY ITEM(ITEM) PR.Z
b 1 0 — 0 9	DAILY ITEM(ITEM) COUNT Z	b 1 0 — 3 6	WEEKLY ITEM(ITEM) WT.Z
b 1 0 — 1 0	DAILY ITEM(DPT.)	b 1 0 — 3 7	WEEKLY ITEM(ITEM) CT.Z
b 1 0 — 1 1	DAILY ITEM(DPT.) PR.ABC	b 1 0 — 3 8	WEEKLY ITEM(DPT.)
b 1 0 — 1 2	DAILY ITEM(DPT.) WT.ABC	b 1 0 — 3 9	WEEKLY ITEM(DPT.) PR.ABC
b 1 0 — 1 3	DAILY ITEM(DPT.) CT.ABC	b 1 0 — 4 0	WEEKLY ITEM(DPT.) WT.ABC
b 1 0 — 1 4	DAILY ITEM(DPT.) PR.Z	b 1 0 — 4 1	WEEKLY ITEM(DPT.) CT.ABC
b 1 0 — 1 5	DAILY ITEM(DPT.) WT.Z	b 1 0 — 4 2	WEEKLY ITEM(DPT.) PR.Z
b 1 0 — 1 6	DAILY ITEM(DPT.) CT.Z	b 1 0 — 4 3	WEEKLY ITEM(DPT.) WT.Z
b 1 0 — 1 7	DAILY ITEM(GR.)	b 1 0 — 4 4	WEEKLY ITEM(DPT.) CT.Z
b 1 0 — 1 8	DAILY ITEM(GR.) PR.ABC	b 1 0 — 4 5	WEEKLY ITEM(GR.)
b 1 0 — 1 9	DAILY ITEM(GR.) WT.ABC	b 1 0 — 4 6	WEEKLY ITEM(GR.) PR.ABC
b 1 0 — 2 0	DAILY ITEM(GR.) CT.ABC	b 1 0 — 4 7	WEEKLY ITEM(GR.) WT.ABC
b 1 0 — 2 1	DAILY ITEM(GR.) PR.Z	b 1 0 — 4 8	WEEKLY ITEM(GR.) CT.ABC
b 1 0 — 2 2	DAILY ITEM(GR.) WT.Z	b 1 0 — 4 9	WEEKLY ITEM(GR.) PR.Z
b 1 0 — 2 3	DAILY ITEM(GR.) CT.Z	b 1 0 — 5 0	WEEKLY ITEM(GR.) WT.Z
b 1 0 — 2 4	DAILY PROFIT TOTAL	b 1 0 — 5 1	WEEKLY ITEM(GR.) CT.Z
b 1 0 — 2 5	DAILY DEPARTMENT	b 1 0 — 5 2	WEEKLY PROFIT TOTAL
b 1 0 — 2 6	DAILY GROUP	b 1 0 — 5 3	WEEKLY DEPARTMENT
b 1 0 — 2 7	DAILY HOURLY TOTAL	b 1 0 — 5 4	WEEKLY GROUP

11 REGISTRATION SELECT

b 1 1 — 0 1	PLU FILE	b 1 1 — 1 1	GROUP
b 1 1 — 0 2	COMMODITY NAME	b 1 1 — 1 2	OPERATOR
b 1 1 — 0 3	PRICE CHANGE	b 1 1 — 1 3	ADVERTISING MES.
b 1 1 — 0 4	EXTRA MESSAGE	b 1 1 — 1 4	CAMPAIGN
b 1 1 — 0 5	COUPON	b 1 1 — 1 7	MACHINE NO.
b 1 1 — 0 6	DATE / TIME	b 1 1 — 1 9	ONLINE SETUP
b 1 1 — 0 7	STORE NAME	b 1 1 — 2 0	FILE DOWNLOAD
b 1 1 — 0 8	PRESET KEY	b 1 1 — 2 1	NUTRITION FILE
b 1 1 — 0 9	LIST	b 1 1 — 2 2	UNIT PRICE CHANGE
b 1 1 — 1 0	DEPARTMENT	b 1 1 — 2 3	LABEL SELECT
		b 1 1 — 2 4	MASTER DELETE


ROUTE MENU
SUB MENU
12 TOTAL MODE SELECT
b 1 2 – 0 1 DAILY TOTAL
b 1 2 – 0 2 WEEKLY TOTAL
b 1 2 – 0 3 MONTHLY TOTAL
13 PASSWORD
b 1 3 – 0 1 REGISTRATION MODE
b 1 3 – 0 2 TOTAL MODE
b 1 3 – 0 3 SUBTRACTION MODE
15 TRAY MASTER
b 1 5 – 0 1 6 inch
b 1 5 – 0 2 7 inch
b 1 5 – 0 3 8 inch
b 1 5 – 0 4 9 inch
b 1 5 – 0 5 10 inch
b 1 5 – 0 6 11 inch
b 1 5 – 0 7 12 inch
b 1 5 – 0 8 13 inch
b 1 5 – 0 9 14 inch
b 1 5 – 1 0 15 inch
b 1 5 – 1 1 16 inch
16 CONVEYOR SETUP
b 1 6 – 0 1 TIMER DELAY (LABEL=<60MM)
b 1 6 – 0 2 TIMER DELAY (LABEL>60MM)
b 1 6 – 0 3 PLUNGER TIMING (SOLENOID ON)
b 1 6 – 0 4 LABEL PLACING (TYPE/NORMAL)
b 1 6 – 0 5 CONVEYOR DELAY TIMER
b 1 6 – 0 6 LABEL PLACING (TYPE/90 DEGREE)
b 1 6 – 0 7 CONVEYOR TIMER (L TYPE)
b 1 6 – 0 8 DELAY TM. (NON WEIGH>60MM)

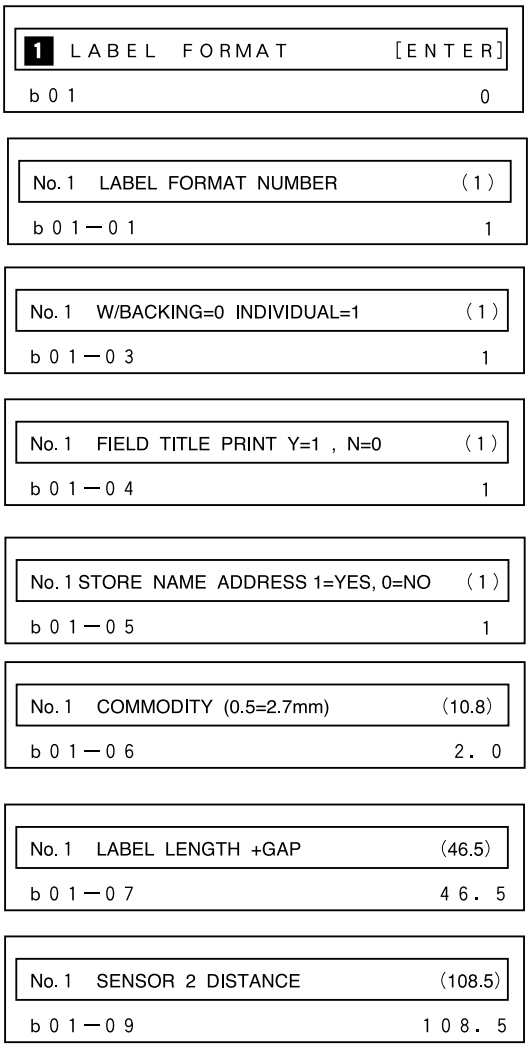
4.2 SETUP MODE

The following pages contain explanations for each menu.

4.2.1 Label Format (b01)

Label format settings are performed in this mode.

See the table below for a detailed explanation of each step.


1 LABEL FORMAT [ENTER]
b 0 1 0
No. 1 LABEL FORMAT NUMBER (1)
b 0 1 — 0 1 1
No. 1 W/BACKING=0 INDIVIDUAL=1 (1)
b 0 1 — 0 3 1
No. 1 FIELD TITLE PRINT Y=1 , N=0 (1)
b 0 1 — 0 4 1
No. 1 STORE NAME ADDRESS 1=YES, 0=NO (1)
b 0 1 — 0 5 1
No. 1 COMMODITY (0.5=2.7mm) (10.8)
b 0 1 — 0 6 2. 0
No. 1 LABEL LENGTH +GAP (46.5)
b 0 1 — 0 7 4 6. 5
No. 1 SENSOR 2 DISTANCE (108.5)
b 0 1 — 0 9 1 0 8. 5

MENU NO.	SETTING ITEM	ENTRY	NOTES
b01-01	Label Format Number	0 : Receipt 1 : Format #1 2 : Format #2 3 : Format #3 4 : Format #4 5 : Format #5 6 : Format #6 7 : Format #7	 60 x 44 64 x 85 Safe Handling (Setable to 47mm) 64 x 110 Bakery 64 x 85 Coupon 66 x 145 Bakery, 3 part 64 x 90 Vertical Nutrition 64 x 59 Safe Handling
b01-03	Backing paper /Peel off type	0 : Backing paper 1 : Peel off type	Select if labels will stay on the backing paper or peel off one at a time.
b01-04	Print Field Titles	0 : No title printing 1 : Title printing	Select if scale will print legends. Example: “TOTAL PRICE”
b01-05	Print Store Name	0 : No printing 1 : Printing	Select if scale will print store name and address.
b01-06	Product Description area. Includes name, ingredients, and messages.	0-99.5 (0.5 increments)	One line of character size 3 = 1.0 One line of character size 1 = 0.5 Must enter values in increments of 0.5 0.5 = 2.7mm, 1.0 = 5.4mm 2.0 = 10.8mm, 4.0 = 21.6mm
b01-07	Label length (including gap)	0-999.9 (0.1 increments)	Length includes label length and space. Maximum 175mm **Note:** Maximum length for automatic application is 85.0mm.
b01-09	Label sensor distance	0-999.9 (0.1 increments)	Default value 110.0. Adjust to fine tune print alignment.

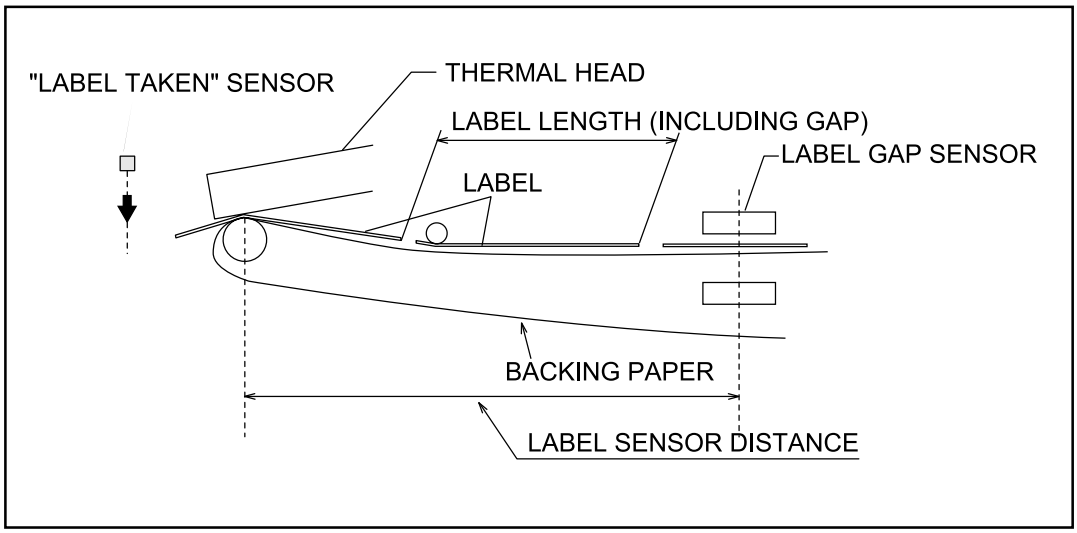
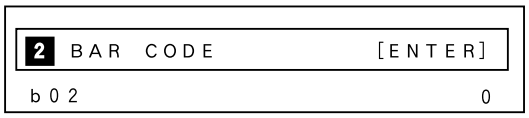


Fig. 4.1 Label Sensor Distance

4.2.2 Bar Code Setting (b02)

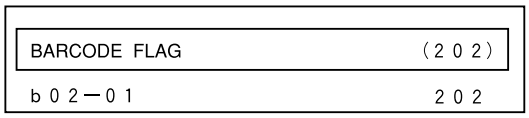
This sets default settings for barcode. Enter selection number and press ENTER.

- Setting Flag Code
- Setting Flag Code for Source Marked Barcode
- Setting Bar Code Type
- Setting 13 Digit UPC Type format



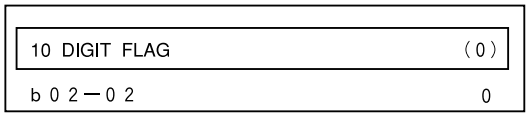
Barcode Flag (b02-01)

Enter a 3 digit number, and press ENTER. The first digit is for 8 digit barcode type, and the next two digits are for 13 digit barcode type.



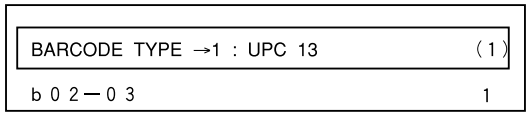
10 Digit Flag (b02-02)

Enter a 4 digit number, and press ENTER. The first two digits are for the 8 digit barcode type, and the last two digits are for the 13 digit barcode type.



Barcode Type (b02-03)

This sets bar code type.
Select from the chart below:

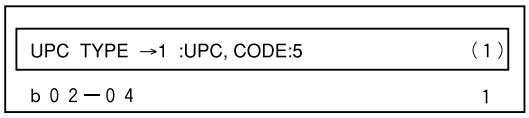


Setting No.	Bar Code Type	
1	UPC 13*	NON-PLU code
2	UPC 8	
3	10 DIGIT 13	Source Marked Code
4	5 DIGIT 8	

*Default

UPC Type (b02-04)

This sets the 13 digit code barcode format. Select from the chart below for settings:



SETTING NO.	CODE SYSTEM	SETTING NO.	CODE SYSTEM
1	UPC,CODE:5*	10	EAN,CD:4, WT:5
2	UPC,CODE:6	11	0,COD:4,PR:5
3	EAN,CODE:6	12	MN:3,CD:2,PR:5
4	UPC,PRICE:5	13	MN:2,CD:3,PR:5
5	EAN9,CD:4,PR:5	14	FG:1,COD:6,PR:4
6	EAN9,PR:4,C/P:5	15	FG:1,COD:6,PR:5
7	EAN,CD:6,WT:4	16	FG:1,COD:6,WT:5
8	EAN,CD:5,WT:5		
9	EAN,CD:4,PR:6		

*Default

Note: Layout of popular UPC formats

1 - FFIIIII (C/P) PPPP (C/D)

2 - FFIIIIIIPPPP (C/D)

4 - FFIIIIIPPPPP (C/D)

6 - FFIIIIIOPPPP (C/D)

4.2.3 Code Settings (b03)

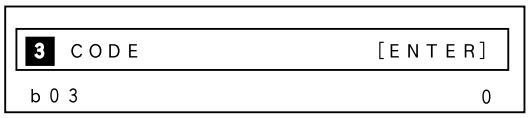
- Sets digits for Department position.
- Sets digits for Group position.
- Sets digits for UPC 8 position.
- Sets digits for UPC 13 position.

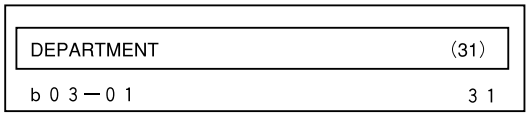
Code is used to set the code positions for department, group, etc. for totals accumulation.

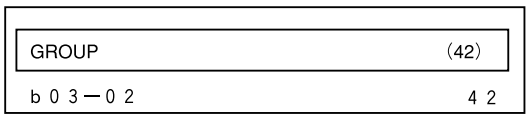
Enter numerical value and press ENTER for each selection.

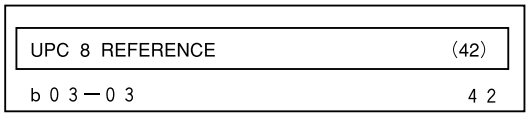
Note: Item Code format = ①②③④⑤⑥⑦⑧ (step P01-16 in PLU programming.

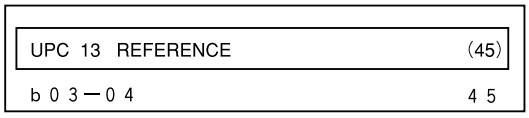
Example: Group set to 42 starts at the fourth digit and uses two digits:
1 2 3 4 5 6 7 8







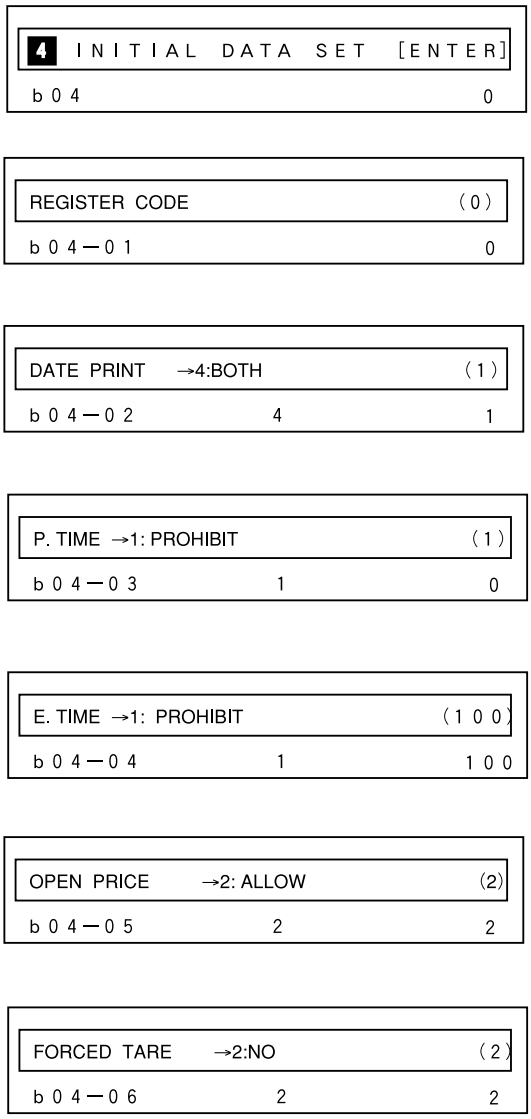




4.2.4 Setting Initial Data (b04)

This is used to set initial data.
Enter numerical value and press ENTER for each selection.

See the table below for a detailed explanation of each step.



MENU NO.	SETTING ITEM	ENTRY		REFERENCE
b04-01	Initial data for register code	3 digits		N/A in USA version.
b04-02	DATE PRINT	Select by arrow, then make numeric entry.		Select by arrow. When number of days equals 1, the shelf life is limited to the present day. Default = 4 : BOTH (1)
		→ key	Numerical	
		1 : PROHIBIT 2 : PACK DATE 3 : EXPIRE 4 : BOTH	Enter [0] Enter [0] 3 digits for shelf life	
b04-03	PACK TIME	Select by arrow, then make numeric entry.		Designated time from 0-11 is a.m. and 12-23 is p.m. **Note:** Select 2 : INSTALLED to print current time. Default = 1 : PROHIBIT (0)
		→ key	Numerical	
		1 : PROHIBIT 2 : INSTALLED 3 : DESIGNATED	Enter [0] Enter [0] Enter 4 digits (designated time) e.g.) for AM 8, enter 800.	
b04-04	EXPIRE TIME	Select by arrow, then make numeric entry.		Designated time from 0-11 is a.m. and 12-23 is p.m. Default = 1 : PROHIBIT (100)
		→ key	Numerical	
		1 : PROHIBIT 2 : DESIGNATED 3 : RELATIVE	Enter [0] Enter 4 digits (designated time) e.g.) for AM 8, enter 800. Enter time in minutes. e.g.) for a 3 hour increase in internal time, enter 180.	
b04-05	OPEN PRICE	Select by arrow or numerical entry		Default = 2 : ALLOW Open Price —The operator may change the price in operating mode.
		→ key	Numerical	
		1 : PROHIBIT 2 : ALLOW	Enter [1] Enter [2]	
b04-06	FORCED TARE	Select by arrow or numerical entry		Default = 2 : NO Forced Tare — a tare weight must be used before a label is allowed to print.
		→ key	Numerical	
		1 : YES 2 : NO	Enter [1] Enter [2]	

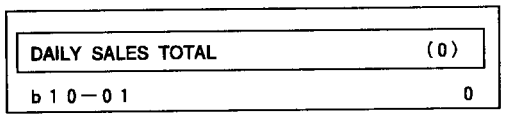
4.2.5 PLU FILE (b08)

This prohibits or enables entry of the selected items in PLU programming.
Enter the numerical value (0 or 1) and press [ENTER] for each selection.

MENU NO.	SETTING ITEM	ENTRY
b 0 8 — 0 2	SALES MODE	1 : Enable (Show) 0 : Prohibit (Hide)
b 0 8 — 0 3	MARK DOWN	
b 0 8 — 0 4	UNIT PRICE	
b 0 8 — 0 5	FIX PRICE	
b 0 8 — 0 6	FIX WEIGHT	
b 0 8 — 0 7	REGI CODE	
b 0 8 — 0 8	PACK QTY	
b 0 8 — 0 9	COST PRICE	
b 0 8 — 1 0	TARE	
b 0 8 — 1 1	DATE PRINT	
b 0 8 — 1 2	SHELF LIFE	
b 0 8 — 1 3	USE BY	
b 0 8 — 1 4	DEPARTMENT	
b 0 8 — 1 5	GROUP	
b 0 8 — 1 6	ITEM CODE	
b 0 8 — 1 7	POP	
b 0 8 — 1 8	EXTRA MESSAGE	
b 0 8 — 1 9	COUPON	
b 0 8 — 2 0	P. TIME	
b 0 8 — 2 1	E. TIME	
b 0 8 — 2 2	BARCODE TYPE	
b 0 8 — 2 3	BARCODE PREFIX	
b 0 8 — 2 4	10 DIG. CODE	
b 0 8 — 2 5	OPEN PRICE	
b 0 8 — 2 7	FORCED TARE	
b 0 8 — 2 8	NUTRITION	
b 0 8 — 2 9	UPPER LIMIT	
b 0 8 — 3 0	LOWER LIMIT	
b 0 8 — 3 1	TRAY	

4.2.6 Preset Report (b10)

This selects which report will be printed when **Preset Report (F02)** is selected from the **Total Mode** menu. See the WPL-3000 User's Manual (Managers) for printing details. Enter numerical value and press [ENTER] for each selection.



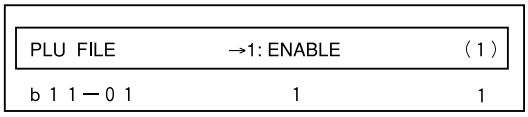
MENU NO.	SETTING ITEM	ENTRY
b10-01	DAILY SALES TOTAL	0 : EXCLUDE 1 : PRINT
b10-02	DAILY MACHINE TOTAL	
b10-03	DAILY ITEM(ITEM)	
b10-04	DAILY ITEM(ITEM) PRICE ABC	
b10-05	DAILY ITEM(ITEM)WEIGHTABC	
b10-06	DAILY ITEM(ITEM) COUNT ABC	
b10-07	DAILY ITEM(ITEM) PRICE Z	
b10-08	DAILY ITEM(ITEM) WEIGHT Z	
b10-09	DAILY ITEM(ITEM) COUNT Z	
b10-10	DAILY ITEM(DPT.)	
b10-11	DAILY ITEM(DPT.) PR.ABC	
b10-12	DAILY ITEM(DPT.) WT.ABC	
b10-13	DAILY ITEM(DPT.) CT.ABC	
b10-14	DAILY ITEM(DPT.) PR.Z	
b10-15	DAILY ITEM(DPT.) WT.Z	
b10-16	DAILY ITEM(DPT.) CT.Z	
b10-17	DAILY ITEM(GR.)	
b10-18	DAILY ITEM(GR.) PR.ABC	
b10-19	DAILY ITEM(GR.) WT.ABC	
b10-20	DAILY ITEM(GR.) CT.ABC	
b10-21	DAILY ITEM(GR.) PR.Z	
b10-22	DAILY ITEM(GR.) WT.Z	
b10-23	DAILY ITEM(GR.) CT.Z	
b10-24	DAILY PROFIT TOTAL	
b10-25	DAILY DEPARTMENT	
b10-26	DAILY GROUP	
b10-27	DAILY HOURLY TOTAL	
b10-28	DAILY OPERATOR TOTAL	
b10-29	WEEKLY SALES TOTAL	
b10-30	WEEKLY MACHINE TOTAL	
b10-31	WEEKLY ITEM(ITEM)	
b10-32	WEEKLY ITEM(ITEM) PR.ABC	
b10-33	WEEKLY ITEM(ITEM) WT.ABC	
b10-34	WEEKLY ITEM(ITEM) CT.ABC	
b10-35	WEEKLY ITEM(ITEM) PR.Z	
b10-36	WEEKLY ITEM(ITEM) WT.Z	
b10-37	WEEKLY ITEM(ITEM) CT.Z	
b10-38	WEEKLY ITEM(DPT.)	
b10-39	WEEKLY ITEM(DPT.) PR.ABC	
b10-40	WEEKLY ITEM(DPT.) WT.ABC	
b10-41	WEEKLY ITEM(DPT.) CT.ABC	
b10-42	WEEKLY ITEM(DPT.) PR.Z	

MENU NO.	SETTING ITEM	ENTRY
b 1 0 — 4 3	WEEKLY ITEM(DPT.) WT.Z	
b 1 0 — 4 4	WEEKLY ITEM(DPT.) CT.Z	
b 1 0 — 4 5	WEEKLY ITEM(GR.)	
b 1 0 — 4 6	WEEKLY ITEM(GR.) PR.ABC	0: EXCLUDE
b 1 0 — 4 7	WEEKLY ITEM(GR.) WT.ABC	
b 1 0 — 4 8	WEEKLY ITEM(GR.) CT.ABC	
b 1 0 — 4 9	WEEKLY ITEM(GR.) PR.Z	1:PRINT
b 1 0 — 5 0	WEEKLY ITEM(GR.) WT.Z	
b 1 0 — 5 1	WEEKLY ITEM(GR.) CT.Z	
b 1 0 — 5 2	WEEKLY PROFIT TOTAL	
b 1 0 — 5 3	WEEKLY DEPARTMENT	
b 1 0 — 5 4	WEEKLY GROUP	

4.2.7 Registration Select (b11)

This prohibits or enables menu items for selection on the registration menu.

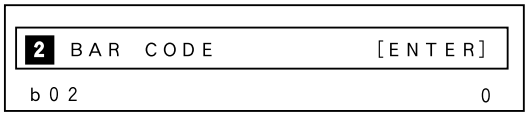
Enter the numerical value (0 or 1) and press ENTER for each selection.



MENU NO.	SETTING ITEM	ENTRY
b 1 1 — 0 1	PLU FILE	1 = ENABLE (Show) 0 = PROHIBIT (Hide)
b 1 1 — 0 2	COMMODITY NAME	
b 1 1 — 0 3	PRICE CHANGE	
b 1 1 — 0 4	EXTRA MESSAGE	
b 1 1 — 0 5	COUPON	
b 1 1 — 0 6	DATE / TIME	
b 1 1 — 0 7	STORE NAME	
b 1 1 — 0 8	PRESET KEY	
b 1 1 — 0 9	LIST	
b 1 1 — 1 0	DEPARTMENT	
b 1 1 — 1 1	GROUP	
b 1 1 — 1 2	OPERATOR	
b 1 1 — 1 3	ADVERTISING MES.	
b 1 1 — 1 4	CAMPAIGN	
b 1 1 — 1 7	MACHINE NO.	
b 1 1 — 1 9	ONLINE SETUP	
b 1 1 — 2 0	FILE DOWNLOAD	
b 1 1 — 2 1	NUTRITION FILE	
b 1 1 — 2 2	UNIT PRICE CHANGE	
b 1 1 — 2 3	LABEL SELECT	
b 1 1 — 2 4	MASTER DELETE	

4.2.8 Total Mode Select (b12)

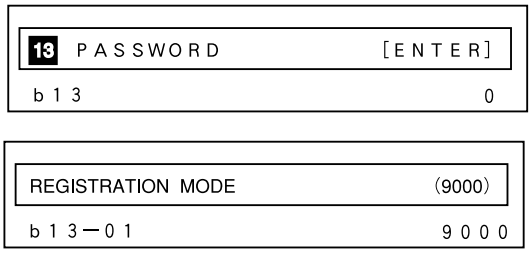
This prohibits or enables access to report totals types.
Enter the numerical value (0 or 1) and press ENTER for each selection.



MENU NO.	SETTING ITEM	ENTRY
b12－01	DAILY TOTAL	1＝ENABLE／0＝PROHIBIT
b12－02	WEEKLY TOTAL	1＝ENABLE／0＝PROHIBIT
b12－03	MONTHLY TOTAL	1＝ENABLE／0＝PROHIBIT

4.2.9 Password (b13)

This allows passwords to be changed for registration, total, and subtraction modes.
Enter a 1 to 4 digit number and press ENTER to set password.

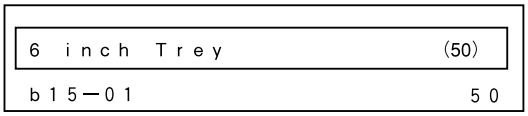


MENU NO.	SETTING ITEM	DEFAULT
b13－01	REGISTRATION MODE	(9000)
b13－02	TOTAL MODE	(8000)
b13－03	SUBTRACTION MODE	(7000)

ITEMS IN PARENTHESES DENOTE DEFAULT SETTING.

Note: A password of 6000 can not be entered.

4.2.10 Tray Master Registration (b15)



The infeed conveyor delay time may be set by tray size. The infeed conveyor carries items a distance of 5mm in a time of 10 msec. Use 10 msec intervals to set delay time.

Example: A 6 inch tray with a set value of 50 would result in a delay time of 500msec.

Use this setting to center packages (right to left) on the weighing element.

MENU NO.	TRAY SIZE	DELAY TIME
b15—01	6 inch	50
b15—02	7 inch	45
b15—03	8 inch	40
b15—04	9 inch	35
b15—05	10 inch	30
b15—06	11 inch	25
b15—07	12 inch	20
b15—08	13 inch	15
b15—09	14 inch	10
b15—10	15 inch	5
b15—11	16 inch	0

Note: Tray Master settings are only used when the WPL-3000 is configured for straight (I-line) operation.

4.2.11 Conveyor Setup (b16)

Use this step to set the timing for package movement and label application position.

Step	Default	Range	Description
b16-01	1	1-256	**Delay Timer (Label ≤ 60mm)** Increase if product reaches labelling position before printing is completed. Time between A and B where: A = Weighing completed, B = Conveyor lifts to move product **Note:** 10 = 1/10th second delay.
b16-02	32	1-256	**Delay Timer (Label > 60mm)** Increase if product reaches labelling position before printing is completed. Time between A and B where: A = Weighing completed, B = Conveyor lifts to move product **Note:** 10 = 1/10th second delay
b16-03	5	1-10	**Plunger Timing (Solenoid ON)** The length of the Label Applicator Stroke. **Note:** 1 = approx 0.5 in., default = 2 in.
b16-04	20	1-256	**Label Placing (Type/Normal)** Time between A and B where: A = Product breaks photo eye, B = Label Applicator fires. **Note:** 1 = approx 1/8th inch distance. Increase = slower, move label left.
b16-05	10	1-256	**Conveyor Delay Timer** (“Straight” configuration only) Time between A and B where: A = **Trailing edge** of product passes photo eye, B = Conveyor lowers package onto scale. **Note:** 1 = approx 1/8th inch distance. Increase = package travels farther.
b16-06	1	1-256	**Label Placing** (Type/90 Degree) Time between A and B where: A = **Trailing edge** of product passes photo eye, B = Label applicator fires. **Note:** 1 = approx 1/8th inch distance. Increase = slower, move label up. Use **ROTATION** function key.
b16-07	50	1-256	**Conveyor Timer (L Type)** (“L” configuration only) Time between A and B where: A = Conveyor lifts after weighing is completed, B = Conveyor lowers for next product. **Note:** 10 = 1/10th second delay.
b16-08	0	1-256	**Delay Timer (Non-Weigh > 60mm)** Increase if product reaches labelling position before printing is completed. Time between A and B where: A = Label begins printing, B = Conveyor lifts to move product **Note:** 10 = 1/10th second delay

Chapter 5
Controller Unit

5.1 Overview 5-2
5.2 Block Diagram 5-3
5.3 Electronic Parts
5.3.1 Display Board 5-3
5.3.2 Junction/Buzzer Board 5-4
5.4 Display and Key Check 5-6
5.5 Disassembly Diagram 5-7

5.1 OVERVIEW

The WPL-3000 display (GP1046A01AA) uses a Fluorescent dot display for characters and a fluorescent digital display for numbers. The keyboard uses membrane keys.
Refer to the ***Operation Manual*** for an explanation of the function keys.

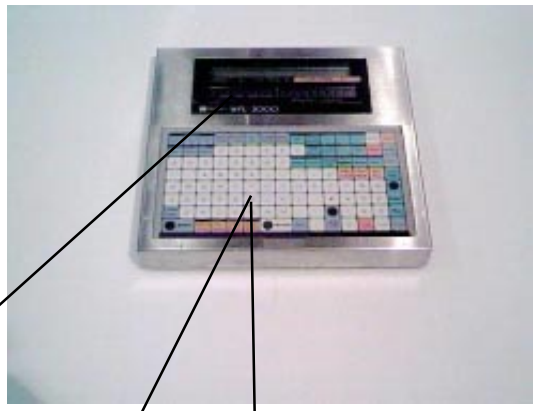
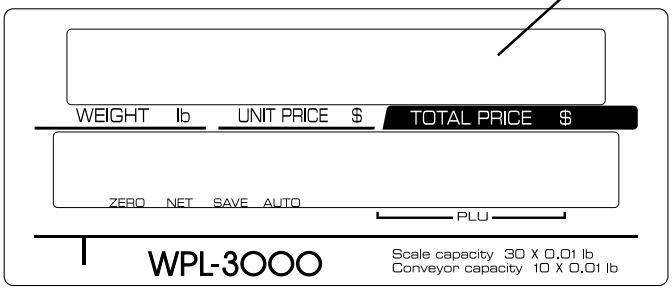
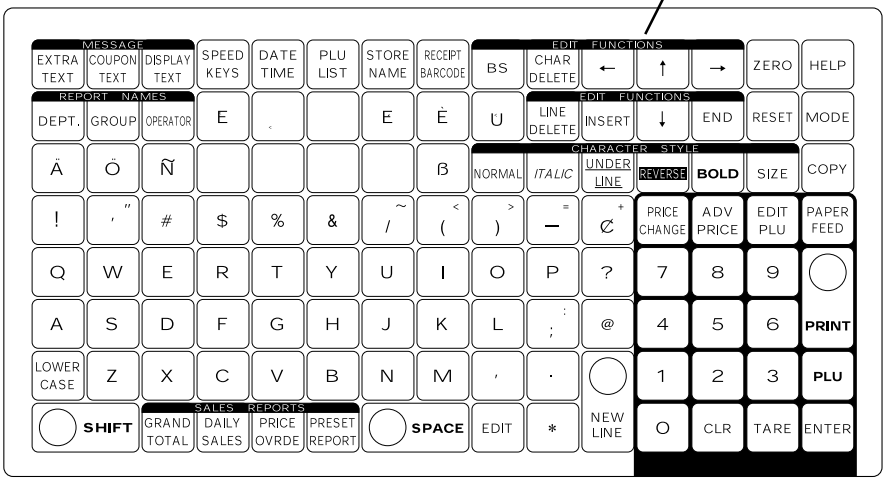
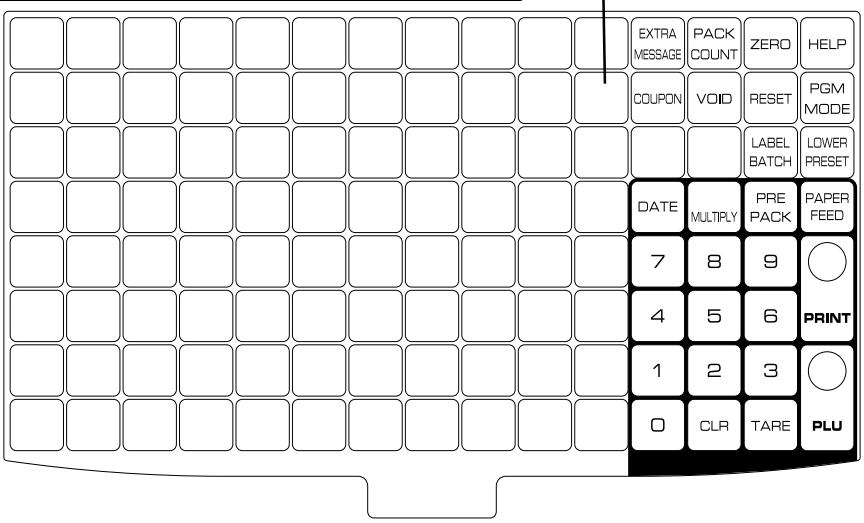


Fig. 5.1 Controller Unit





Registration Keyboard Layout



Operation Keyboard Layout

5.2 BLOCK DIAGRAM

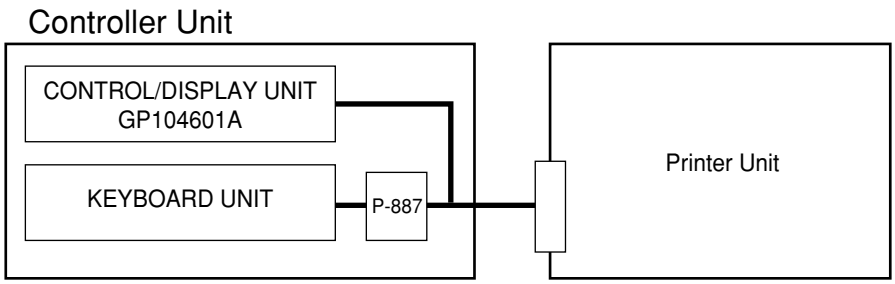


Fig. 5.2 Controller Unit

5.3 ELECTRONIC PARTS

5.3.1 Display Board (GP1046A01AA)

The WPL-3000 utilizes a 256 X 16 (horizonal x vertical) full dot and 7 segment fluorescent digital displays. Display data is received from and keyboard entries sent to the main CPU board (P-834x) located in the printer unit. Power is supplied by the power supply unit SLS100PW in the contol box located in the weigh conveyor unit.

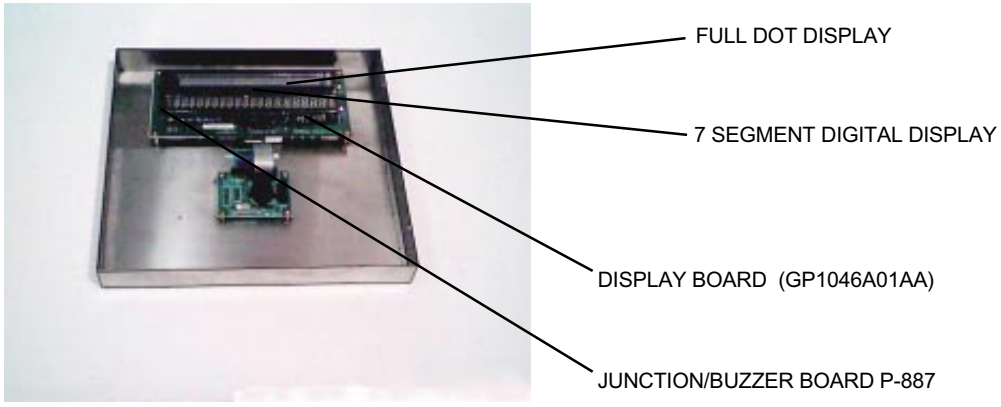


Fig. 5.3 Display Board

CAUTION

1) Handle the display modules with care since they are made of glass.
2) Do not remove the electrical plug when the machine is on.

Fuses are soldered on the board to protect the full dot and 7 segment digital displays.

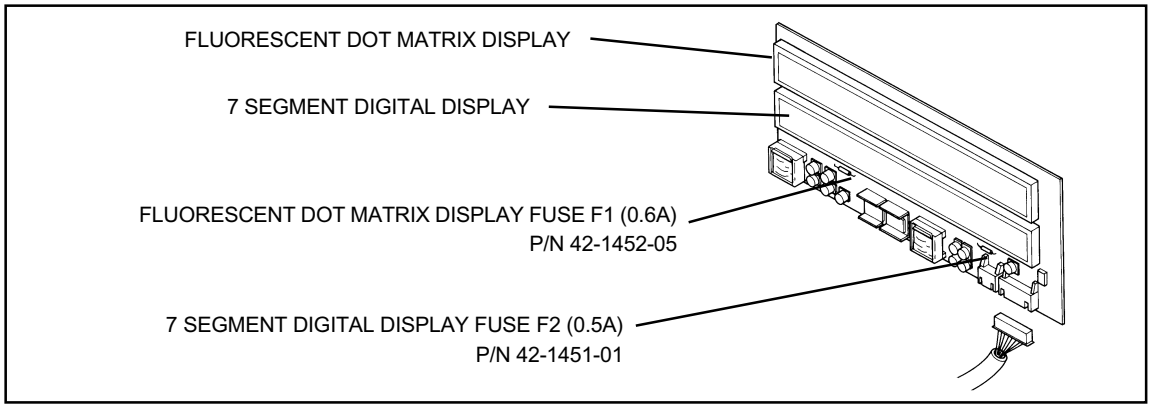

FLUORESCENT DOT MATRIX DISPLAY
7 SEGMENT DIGITAL DISPLAY
FLUORESCENT DOT MATRIX DISPLAY FUSE F1 (0.6A)
P/N 42-1452-05
7 SEGMENT DIGITAL DISPLAY FUSE F2 (0.5A)
P/N 42-1451-01

Fig. 5.4 Display Board

All DIP switches on the display unit must remain in the OFF position. If any switches are set to ON, the display will not work properly.

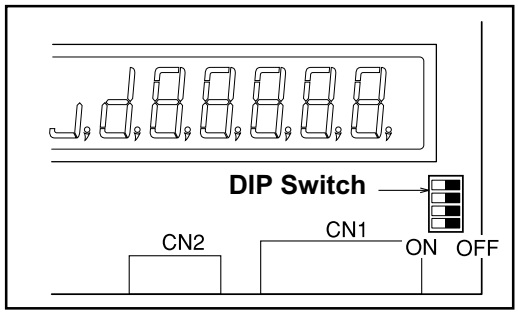


Fig. 5.5 DIP Switch

5.3.2 Junction/Buzzer Board (P-887)

Keyboard entries are sent to the main CPU board (P-834x) in the printer unit via the Junction/Buzzer board (P-887).

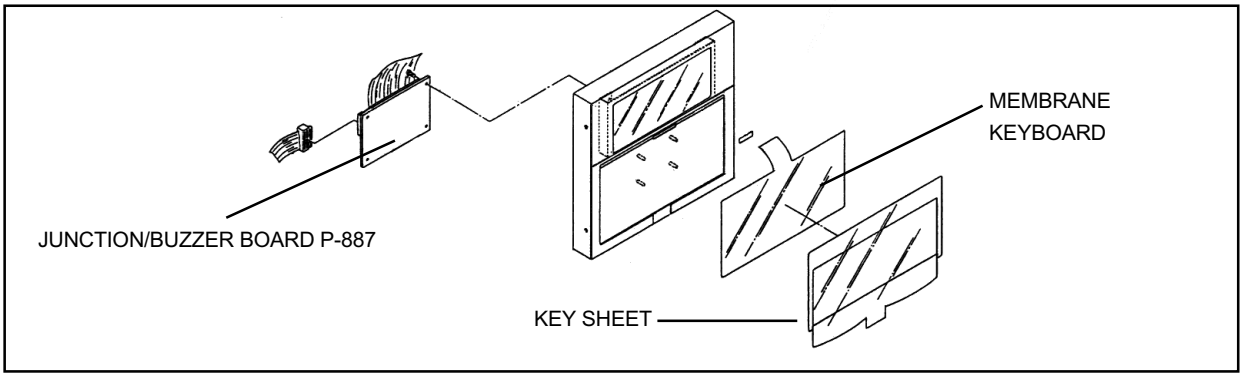


Fig. 5.6 Keyboard

A single confirmation beep is made every time a key is pressed.
A buzzer attached to the Junction/Buzzer board emits a series of beeps when a key entry error is made.

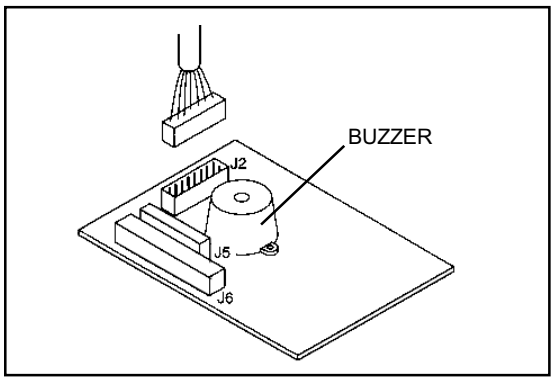
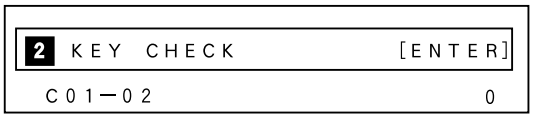
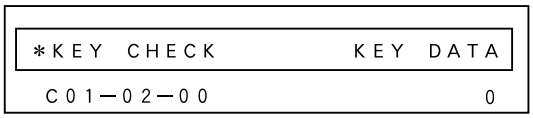


Fig. 5.7 Junction/Buzzer Board P-887

5.4 DISPLAY AND KEY CHECK

When test mode C01-02 is activated, all 120 keys on the keyboard may be checked for functionality.
Refer to ***Test Mode*** (Sec. 3.2.1 and Sec 3.2.2 in this manual for entering the test mode.





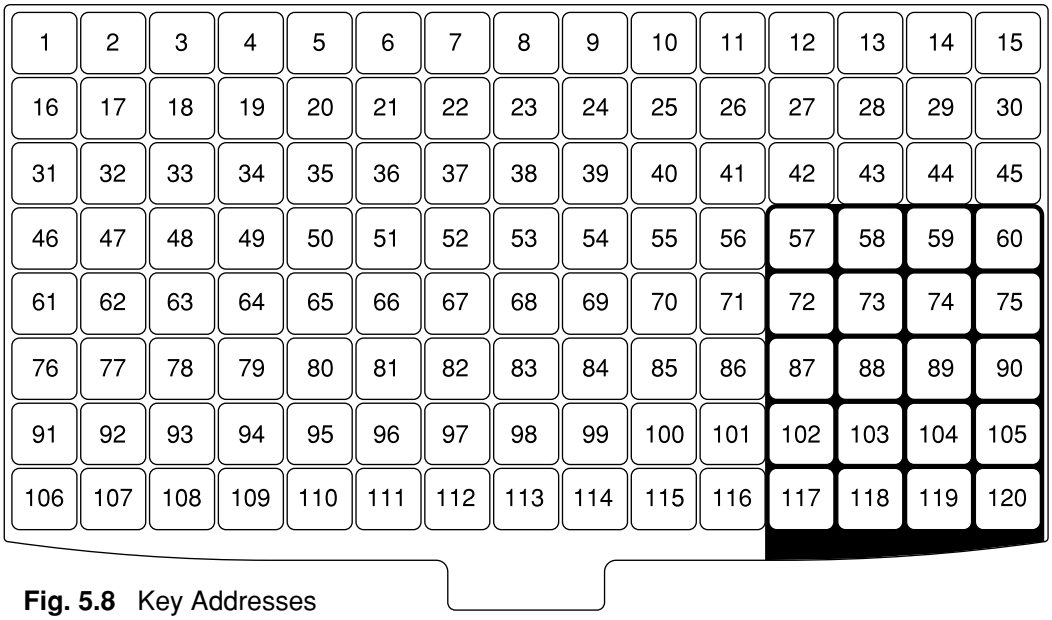


Fig. 5.8 Key Addresses

Note : Key 29 (RESET) is used to exit key check mode.

Test mode C01-03 is used for display check of the full dot and 7 segment digital displays.

5.5 DISASSEMBLY DIAGRAM (CONTROLLER UNIT)

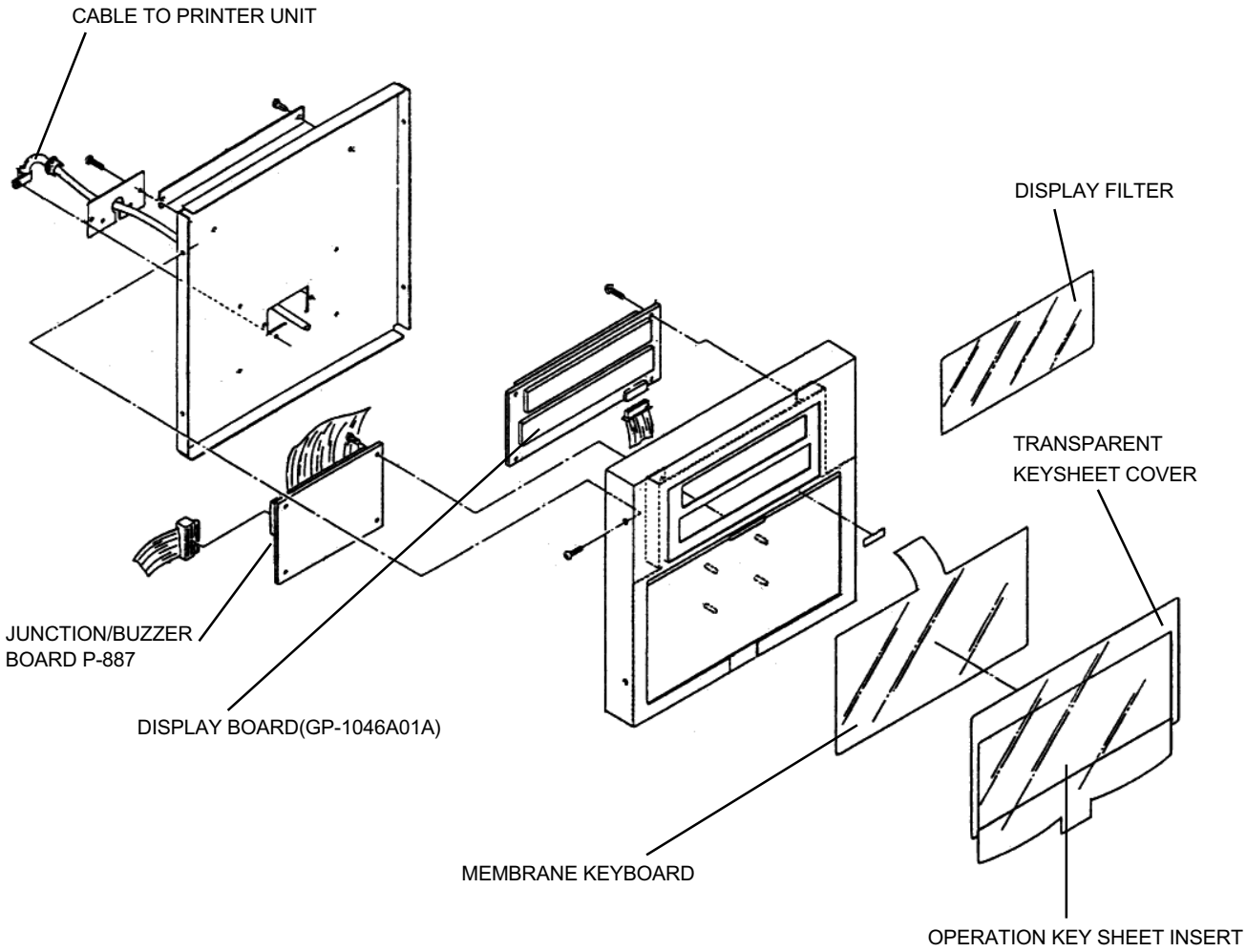


Fig. 5.9 Controller Unit

Chapter 6
Weigh Conveyor

6.1 Overview 6-2
6.2 Block Diagram 6-3
6.3 Electronic Parts
6.3.1 Load Cell Unit 6-4
6.3.2 A/D Converter Board 6-5
6.4 Scale Check 6-6
6.5 Disassembly Diagram 6-7

6.1 OVERVIEW

The scale unit is installed in the weigh conveyor and uses a load cell (resistance strain gage) as a weigh sensor.

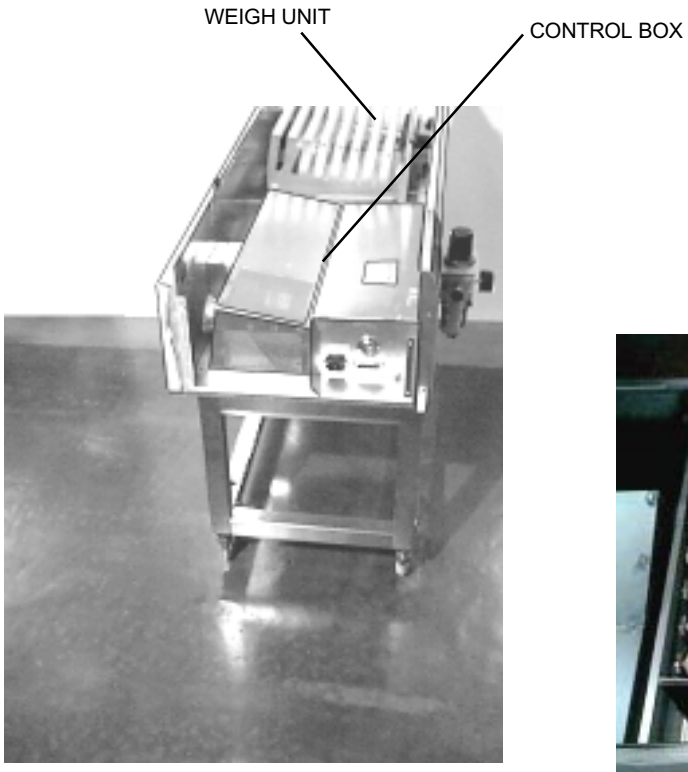


Fig. 6.1 Weigh conveyor

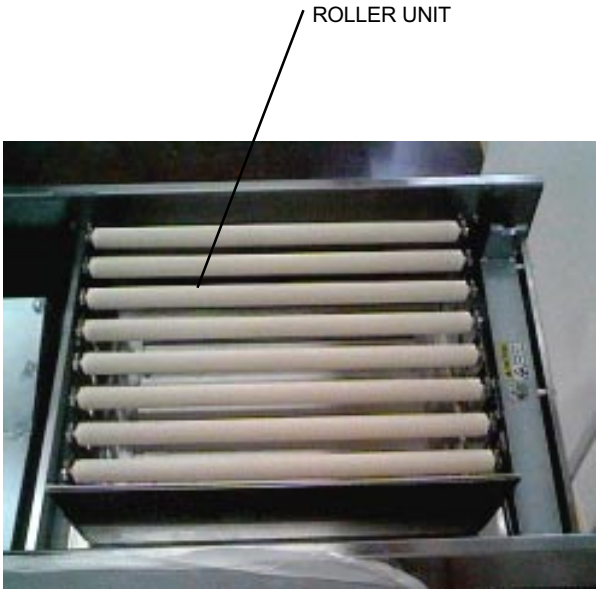


Fig. 6.2 Items to be weighed roll across a sloping conveyor

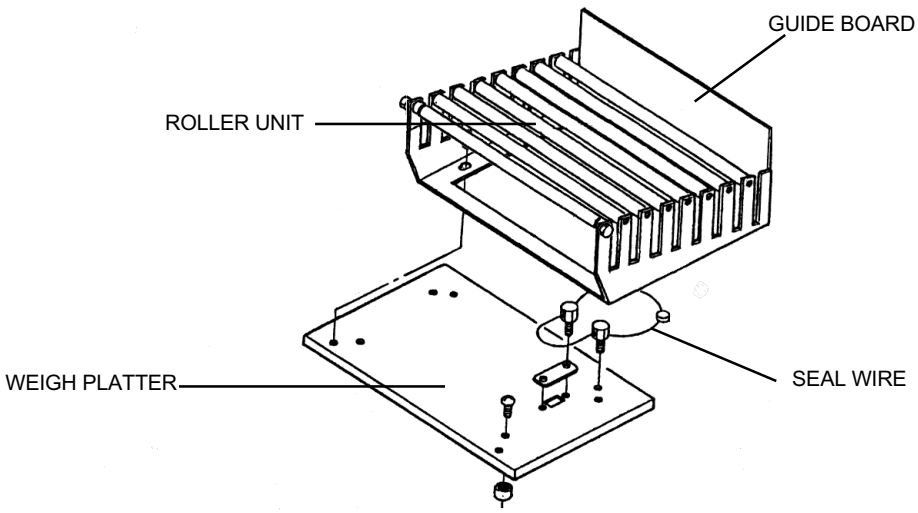


Fig. 6.3 Roller Unit

6.2 BLOCK DIAGRAM

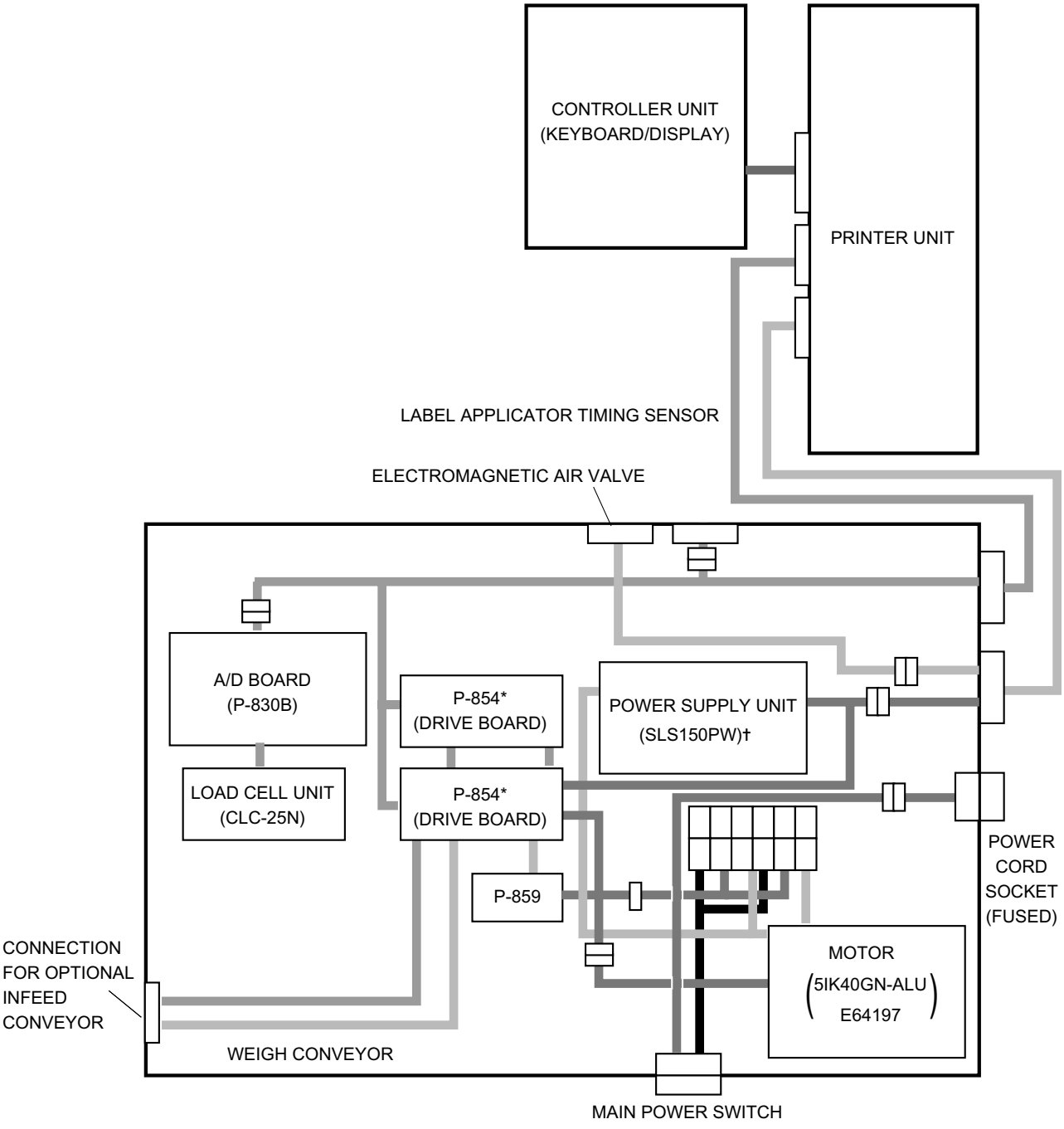


Fig. 6.4 Block Diagram

*Later designs incorporate a single P-854 Drive board.

†Later designs use two power supplies:

LSF100-24 (36-3409-01) – Main 24VDC

LDA30F-24 (46-3180-09) – Fans

6.3 ELECTRONIC PARTS

6.3.1 LOAD CELL UNIT

The load cell (resistance strain gage) converts power and load into direct electrical signals.

Load cell type	CLC-25N
Load (maximum)	25 kg
Standard output	within ±5%
Insulated resistance	over 5M Ohm
Applied voltage	-12V

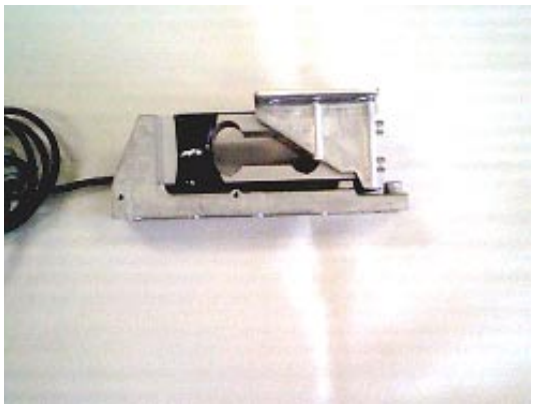


Fig. 6.5 Load cell

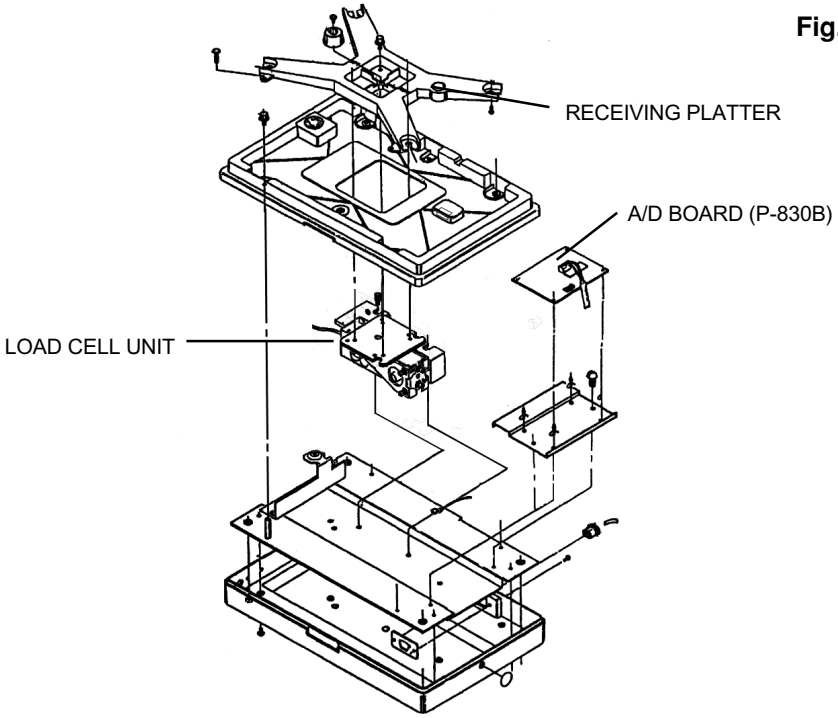


Fig. 6.6 Disassembly of scale unit

6.3.2 A/D Converter Board (P-830B)

Analog signals from the load cell are amplified and converted to digital data. A/D converted data is transmitted to the CPU board (P-834x) board installed in the printer unit. Power regulators are installed on the A/D converter board for IC and load cell electrical power levels. These power regulators convert electricity supplied from the power supply unit (located in the weigh conveyor) to lower, more stable voltages.

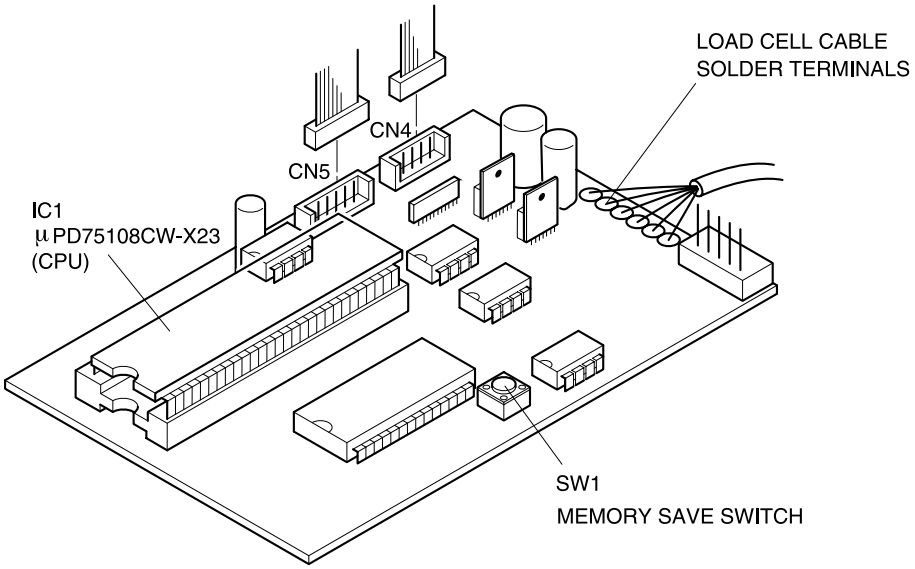


Fig. 6.7 A/D Converter Board (P-830B)

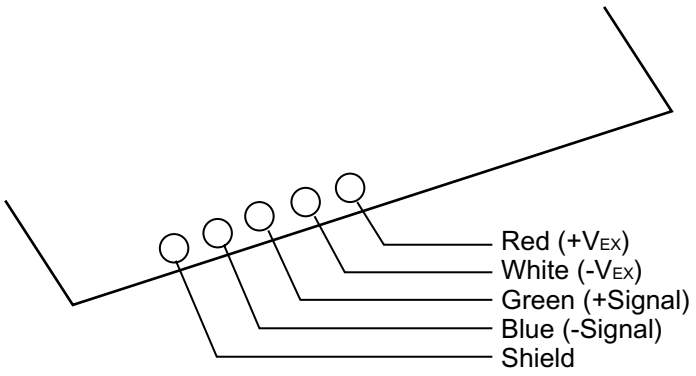
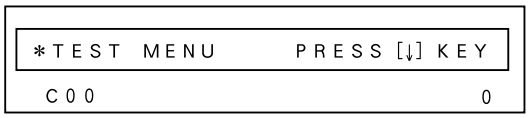


Fig. 6.7a Load Cell Connections

6.4 SCALE CHECK

The A/D converter can be checked from test mode.

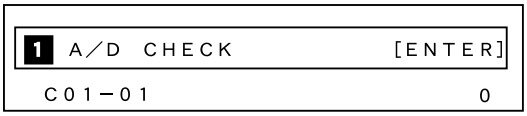


Refer to ***Test Mode*** (Sec. 3.2.1 and 3.2.2) in this manual for entering the test mode.

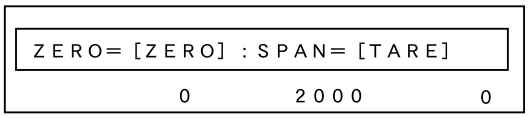
Use [⇩] to scroll down and press [ENTER] to select.
Selection can also be made by numeric entry and pressing [ENTER].

1. Select hardware test mode (C01) and press [ENTER].

2. Select A/D check (C01-01) and press [ENTER].



3. Press [ZERO].



Confirm that the A/D converter initial value is stabilized within 2000±1 count.

Note: See Section 10.3 for calibation procedure.

6.5 DISASSEMBLY DIAGRAM

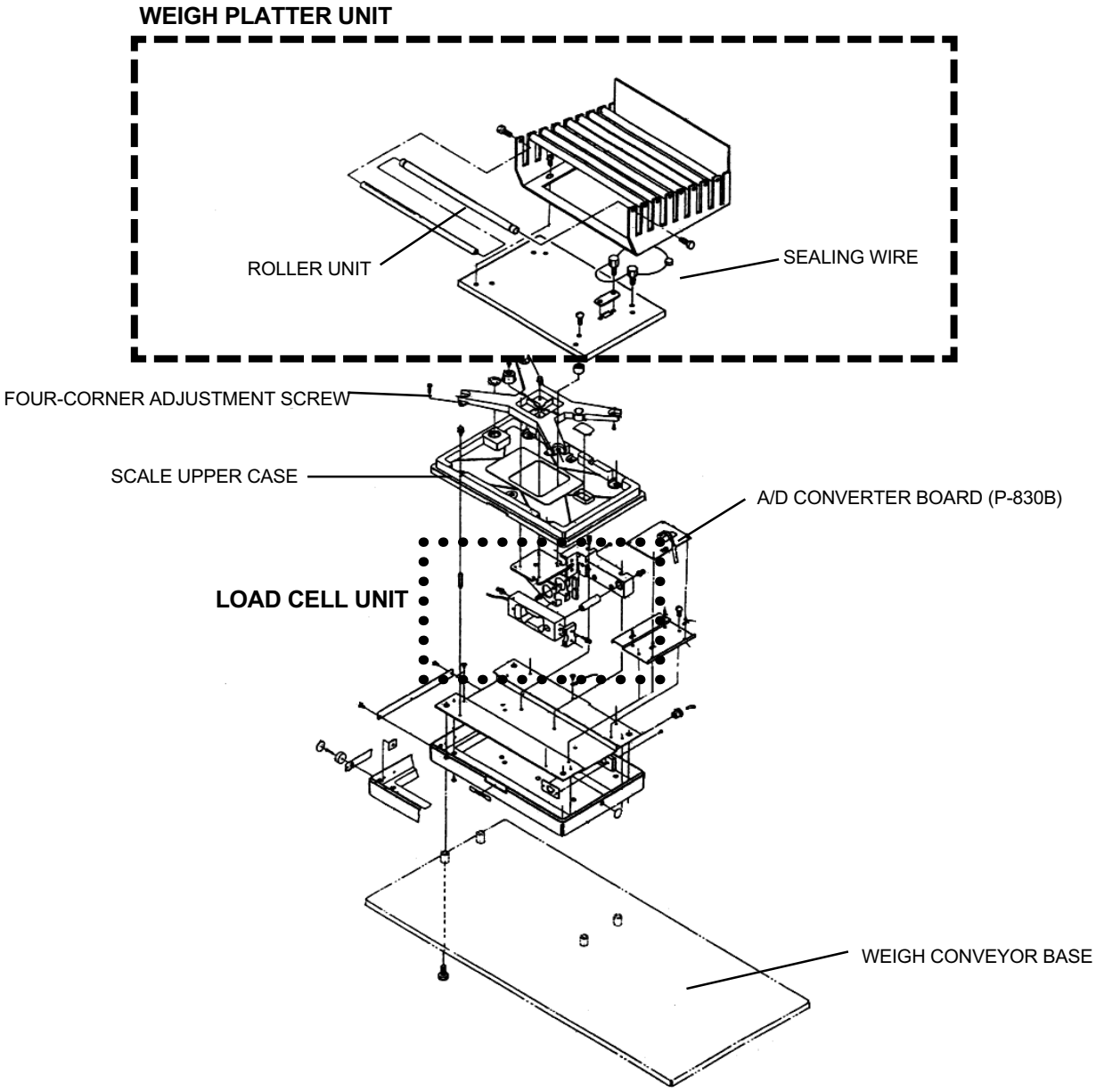


Fig. 6.8 Disassembly Diagram

Chapter 7
Printer/Label Applicator Unit

7.1 Overview 7-2
7.2 Block Diagram 7-3
7.3 Electronic Components 7-4
7.3.1 Printer Unit (Thermal head, label sensor adjustment) .. 7-4
7.3.2 Label Applicator Unit 7-10
7.4 Adjustment Position of the Label Applicator Unit 7-14
7.5 Movement Test 7-15
7.6 Disassembly Diagram (Stand Unit) 7-16
7.7 Disassembly Diagram (Printer Unit) 7-16
7.8 Disassembly Diagram (Label Applicator Unit) .. 7-17

7.1 OVERVIEW

Figure 7.1 is a side view of the printer and label applicator units. The units are suspended from the printer stand and can be adjusted according to the height of the product and the direction in which the label is applied. The printer employs a 60mm wide thermal head.

IMPORTANT NOTE:
Later versions of the WPL-3000 use a front mounted printer arm.

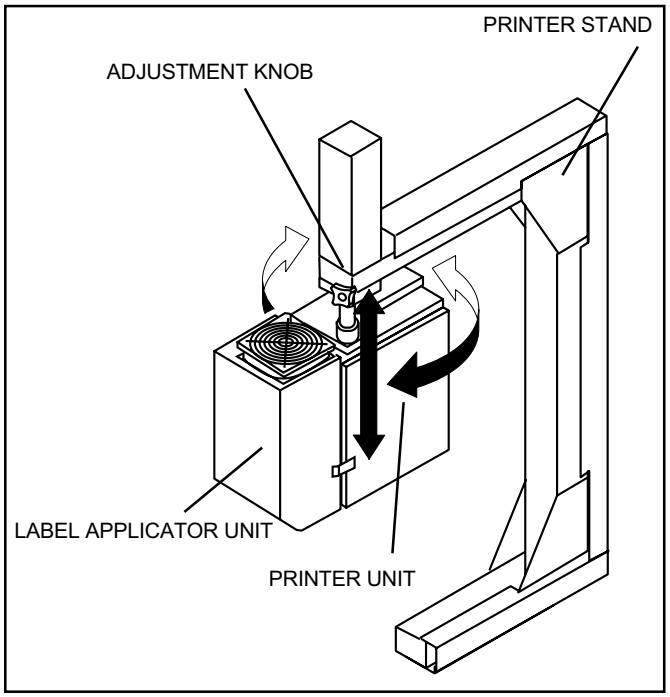


Fig. 7.1 Printer Unit

The labeling applicator arm in the label applicator unit (Figure 7.2) moves by electromagnetic valve and air cylinder.

The air cylinder is raised and lowered by the electromagnetic valve. This movement of the air cylinder moves the labeling applicator arm downward, applying the label to the product. The stroke of the labeling applicator arm is 100mm 4 inches).

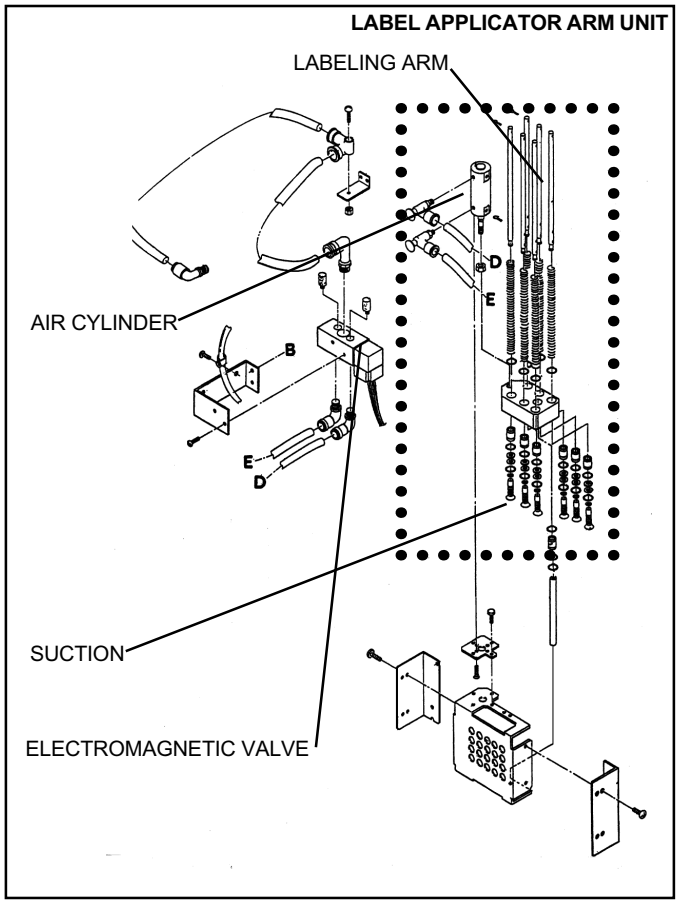


Fig. 7.2 Label Applicator Unit

7.2 BLOCK DIAGRAM

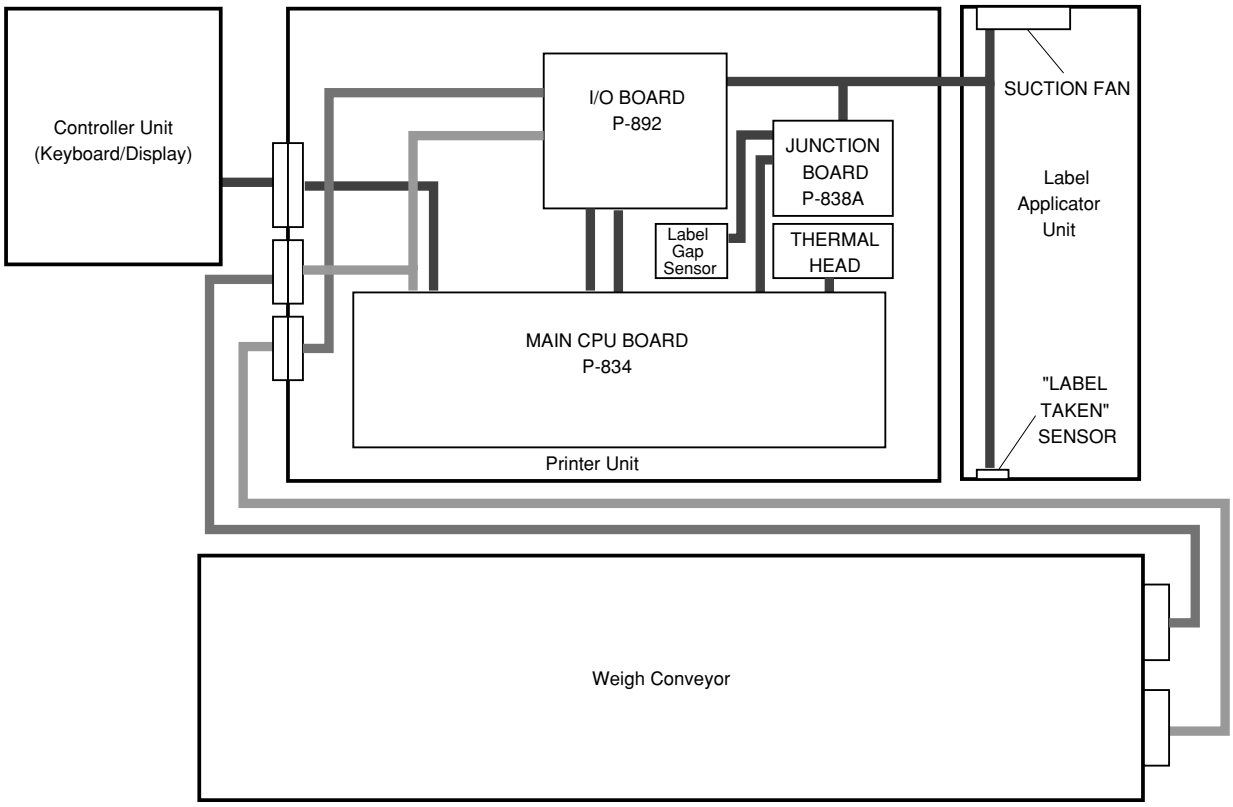


Fig. 7.3 Block Diagram

7.3 ELECTRONIC COMPONENTS

7.3.1 Printer Unit (Thermal head, label sensor adjustment)

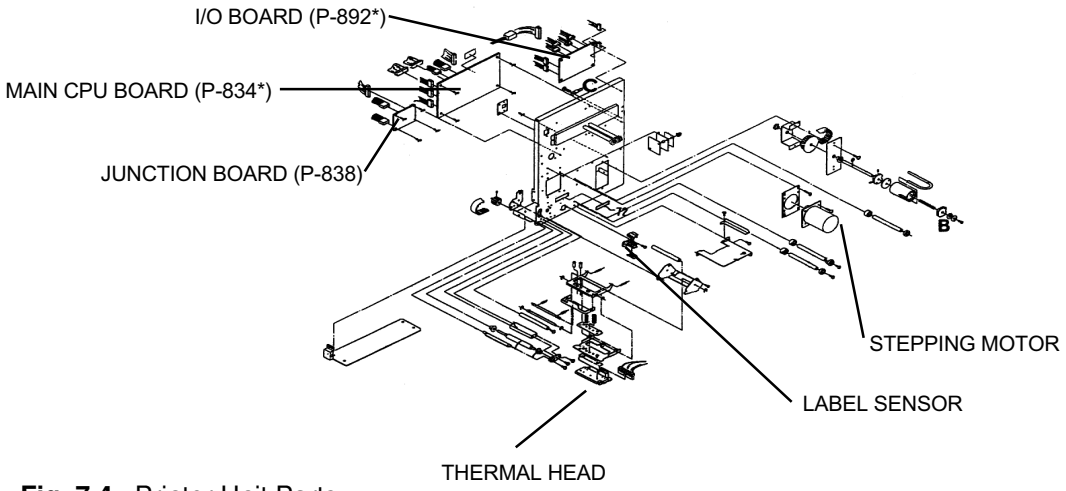


Fig. 7.4 Printer Unit Parts

Main CPU Board (P-834*)

A 16 bit microprocessor is installed on the main board, controlling data management for the entire machine. A lithium battery is used as a power source for backing up memory data. This lithium battery is not rechargeable. The CPU board monitors and controls the following functions:

1. Main body control
2. A/D conversion input
3. Keyboard data input
4. Output to display board
5. Label feed motor and thermal head printing output
6. Label sensor and “label taken” sensor input
7. Conveyor control
8. I ^{2}NET output

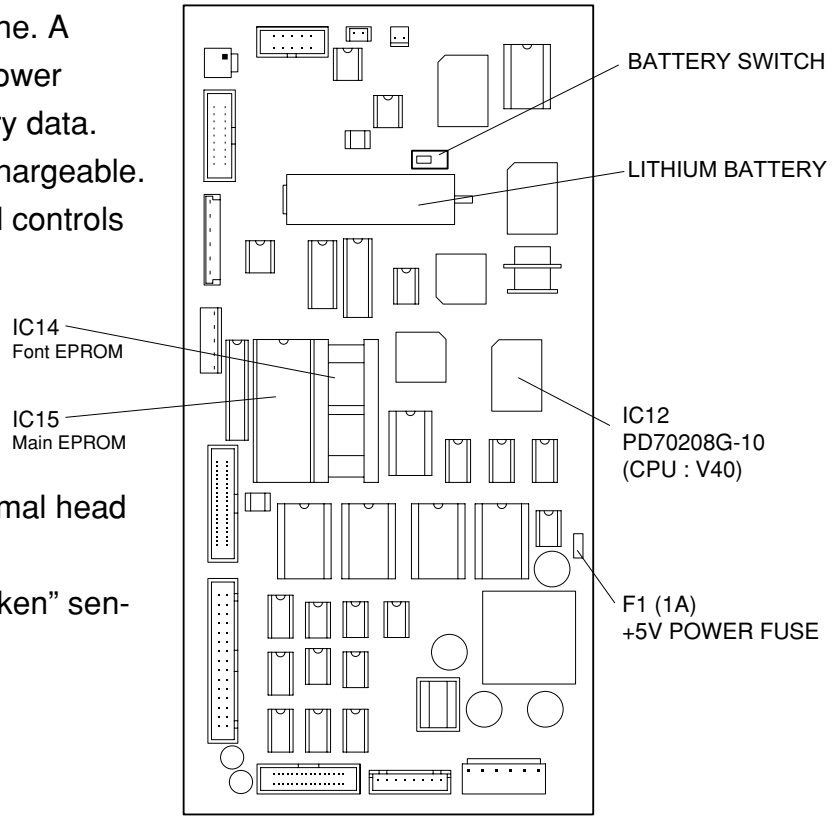


Fig. 7.5 Main CPU Board

* asterisk indicates latest version, subsequent versions will be followed by letter (e.g.,A,B,C)

Note: IC15 (CHIP0) socket contains the Main Program EPROM. It begins with the letter B, C or Z based on the program function. IC14 (CHIP1) contains the Font Program. It begins with the letter F.

CAUTION When replacing the main board, make sure the battery switch is ON.

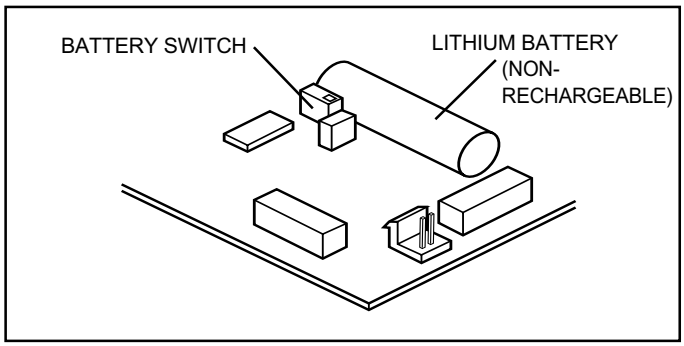


Fig. 7.6 Battery + Switch

I/O board (P-892*)

Input signals from the CPU board (P-834*) are converted to 24VDC output signals. Label applicator fan motors and electromagnetic air valves are controlled by the I/O board (P-892*).

* asterisk indicates latest version, subsequent versions will be followed by letter (e.g., A,B,C)

Junction Board (P-838*)

This board transmits peeling sensor (reflective type) and stepping motor signals through the cable from the J4 connector to the main board.

* asterisk indicates latest version, subsequent versions will be followed by letter (e.g., A,B,C)

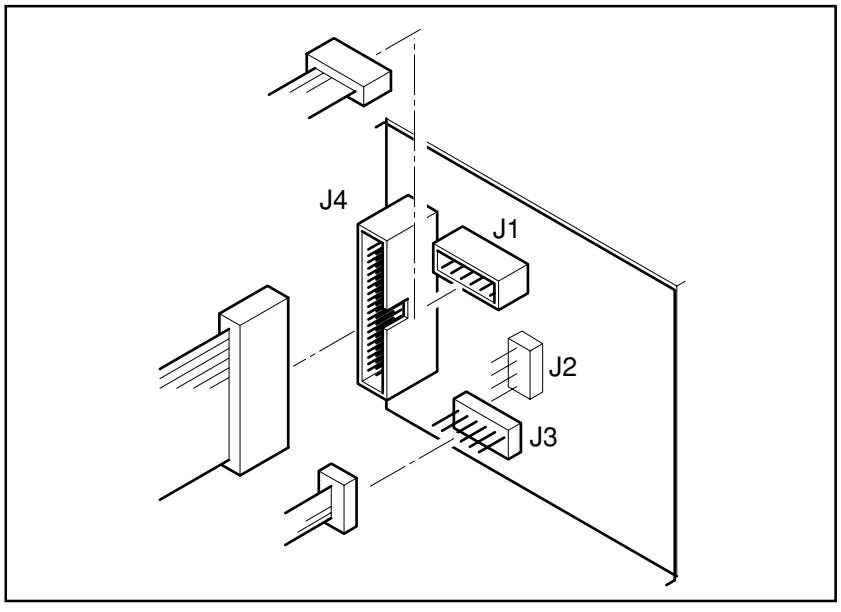


Fig. 7.7 Junction Board (P-838*)

Thermal Head

The thermal head is constructed of 448 dot heating elements and made especially for printing labels. When ink, glue, or other debris becomes stuck to the printing area of the thermal head, heat to the label becomes uneven lowering print quality and shortening the operational life of the thermal head.

Type	LH3124
Overall dot count	448 dots
Dot pitch	0.135 mm
Head resistance value	528 to 672 Ohm
Required power	0.66[W/dot]
Applied voltage	24[V] DC

Refer to ***Operation Manual*** for daily maintenance of thermal head.

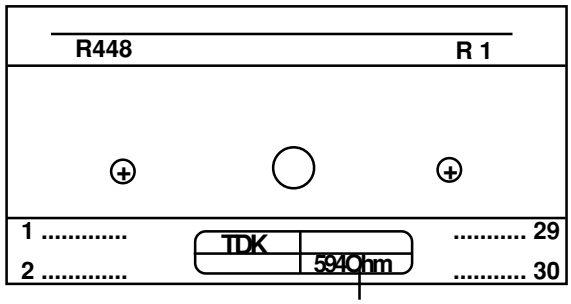


Fig. 7.8 Thermal Head

Thermal Head Adjustment

The thermal head prints one line at a time. If the printing surface of the thermal head and the top edge (crown) of the print roller are not aligned, the label will not print clearly across the entire width of the label. Print a test label to test printing. If print quality is unsatisfactory, adjust according to the following procedure :

(1) Loosen the thermal head attachment screws (2) by a 1/4 turn.

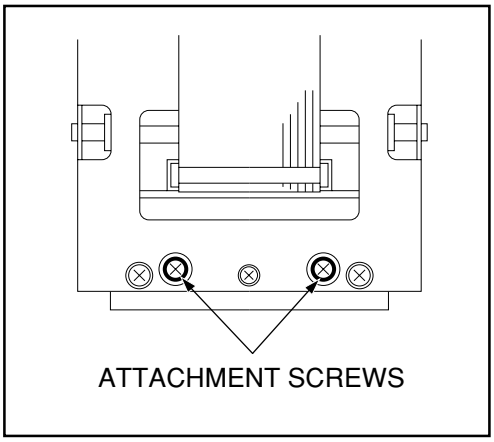


Fig. 7.9 Locations of screws

(2) Manually adjust the position of the thermal head so that the top edge (crown) of the roller and thermal head print surface are aligned. Print out another test label and adjust until all characters print clearly with the proper darkness. When adjustment is complete, tighten the two attachment screws.

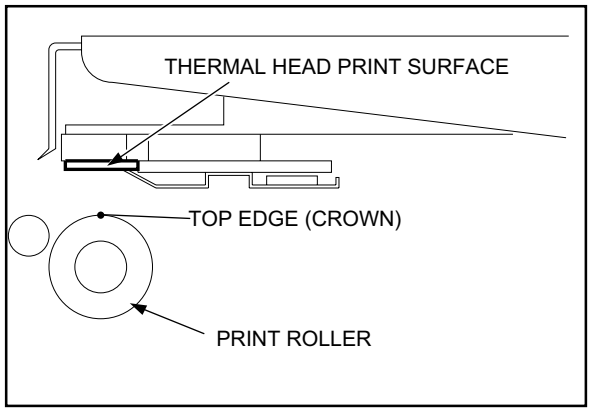
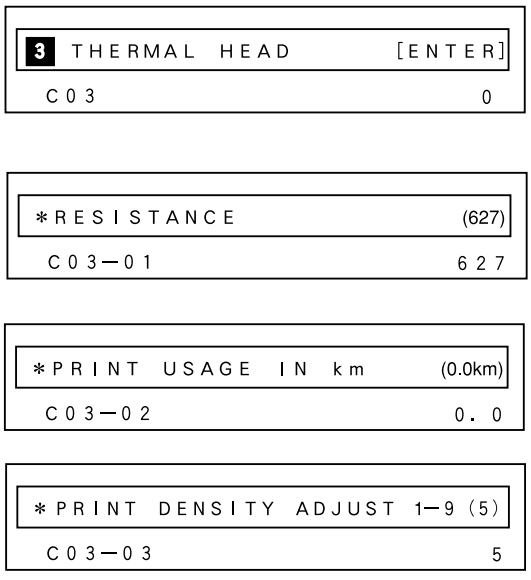


Fig. 7.10 Thermal Head Print Surface

CAUTION

Avoid touching the surface of the head. If the surface is touched, clean using head cleaner made especially for thermal heads.
Lower print density before adjusting for more precise adjustment.

(3) Set the thermal head resistance value. Setting are performed in test mode C03: THERMAL HEAD.
Refer to ***Test Mode*** (Sec. 3.2.1 and 3.2.4) for starting test mode.



(4) Print a test label.

Label Sensor

The label sensor utilizes a photo-interrupter. Gaps between labels are detected to ensure labels are issued one at a time. Label sensor adjustment is performed to compensate for differences in light transmission which vary according to the type of label paper being used.

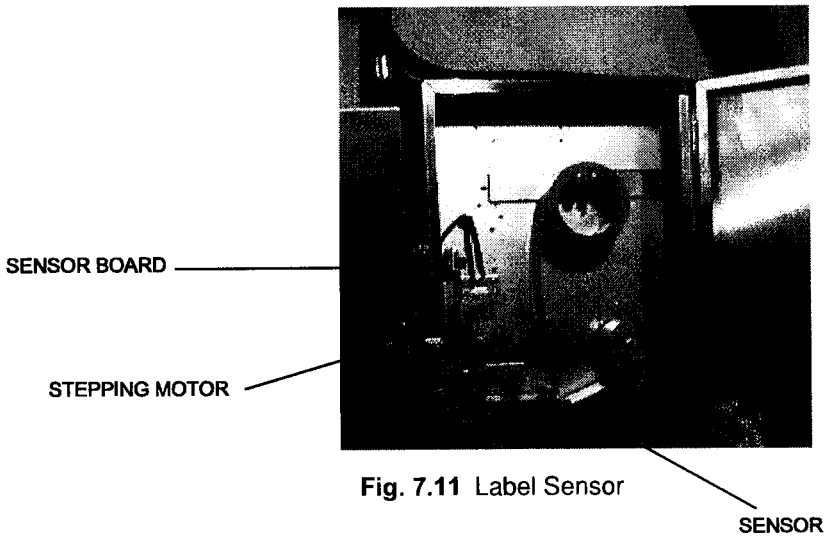


Fig. 7.11 Label Sensor

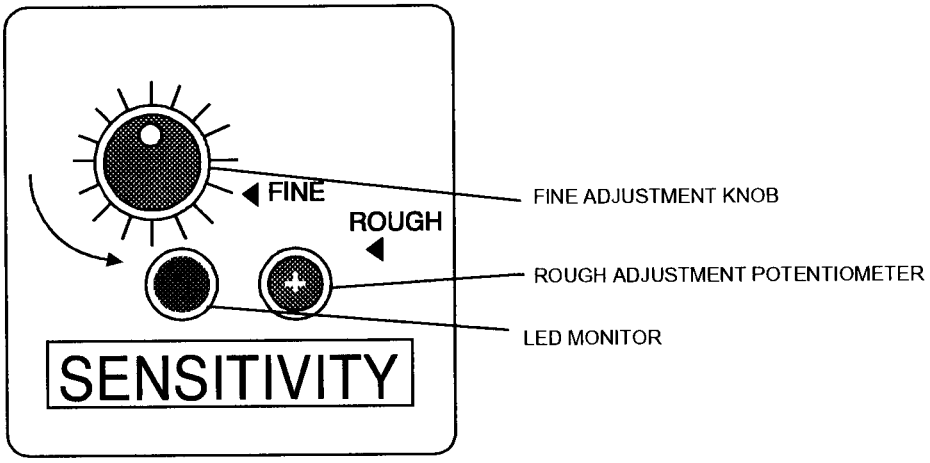


Fig. 7.12 Adjustment Controls

CAUTION

The LED flashes as the gap between labels passes through the label sensor.

Adjustment Method

1) Align the fine adjustment knob to center.
2) Turn the rough adjustment potentiometer counterclockwise as far as it will go.
3) Press the Paper Feed key once and adjust the rough adjustment potentiometer clockwise to the position where a single lable is issued. This point is "A."
4) Turn the rough adjustment potentiometer clockwise as far as it will go.
5) Press the Paper Feed key once and adjust the rough adjustment potentiometer counterclockwise to the position where a single label is issued. This point is "B."
6) Set the rough adjustment potentiometer midway between points A and B.

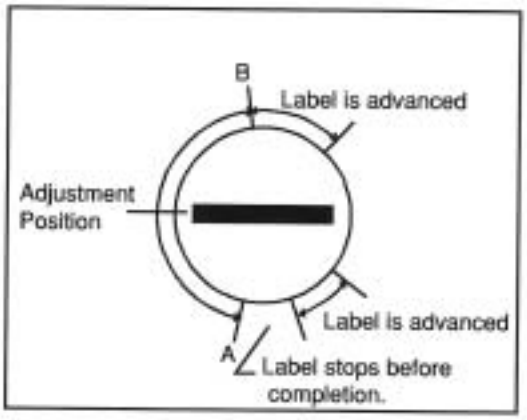


Fig. 7.13 Rough Adjustment Potentiometer

3000 Series Label Gap Sensor Alternate Adjustment Method

1) Turn FINE adjustment knob to cener position.
2) Place backing paper only under gap sensor.
3) Turn ROUGH adjustment until the point where the red LED turns on/off - this is point A.
4) Place label on backing paper under gap sensor.
5) Turn ROUGH adjustment until the point where the red LED turns on/off - this is point B.
6) Center the ROUGH adjustment between points A and B.

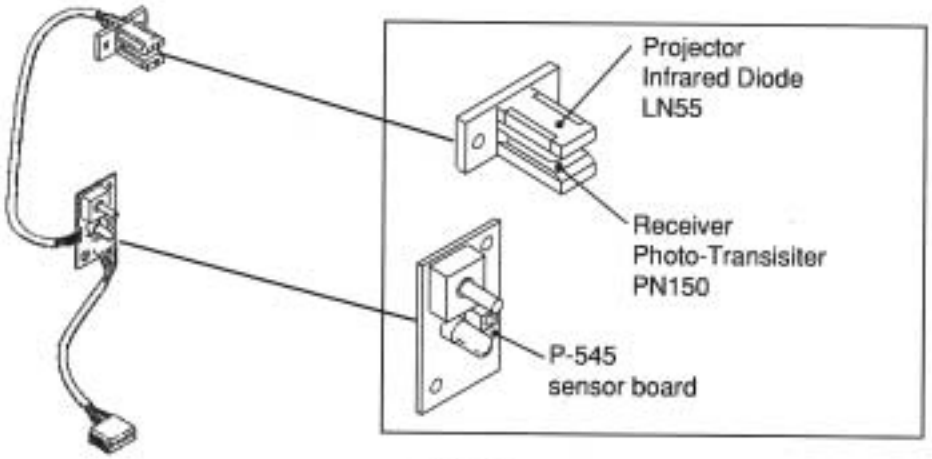


Fig. 7.14

Stepping Motor

The labels are advanced using a stepping motor.

7.3.2 Label Applicator Unit

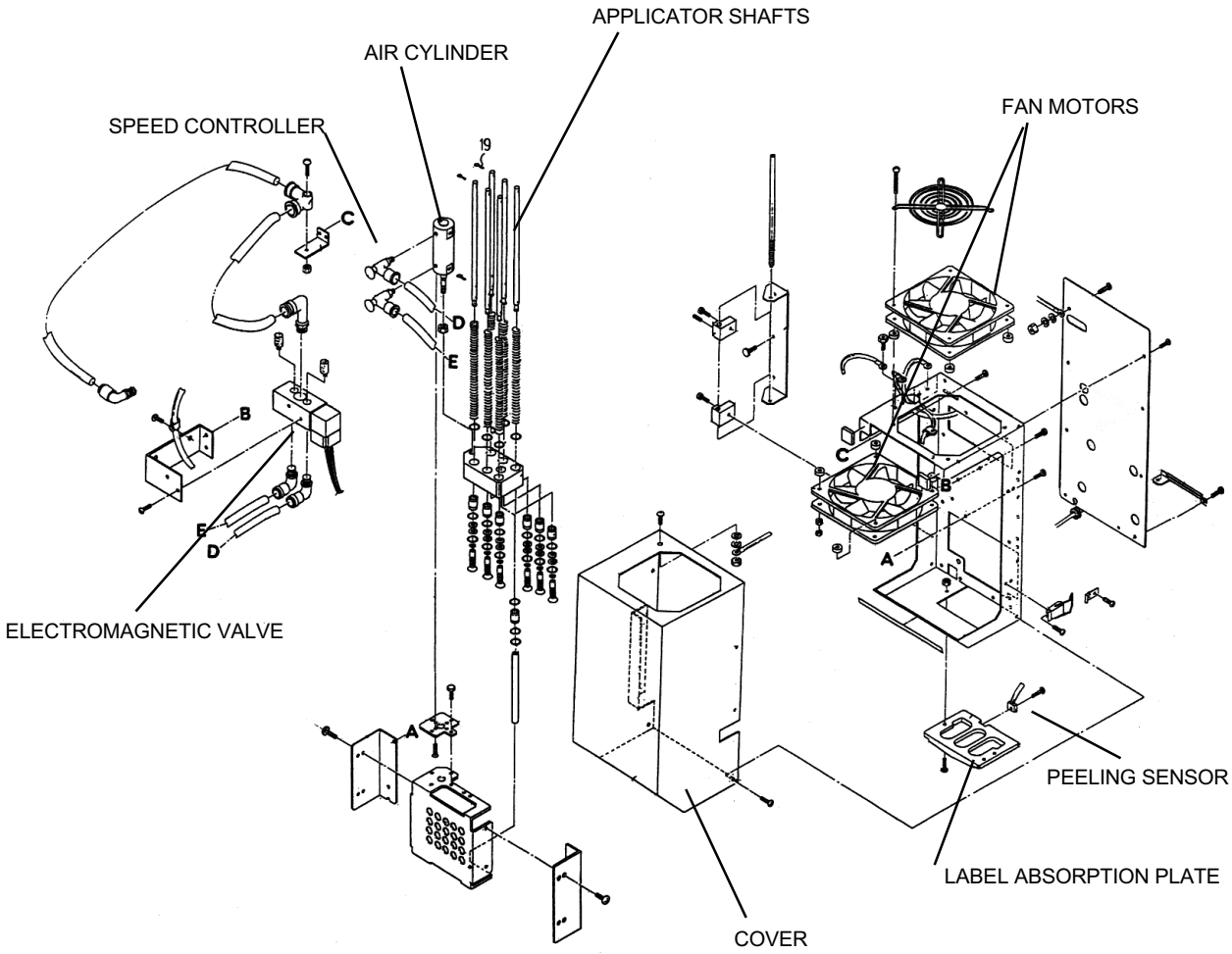


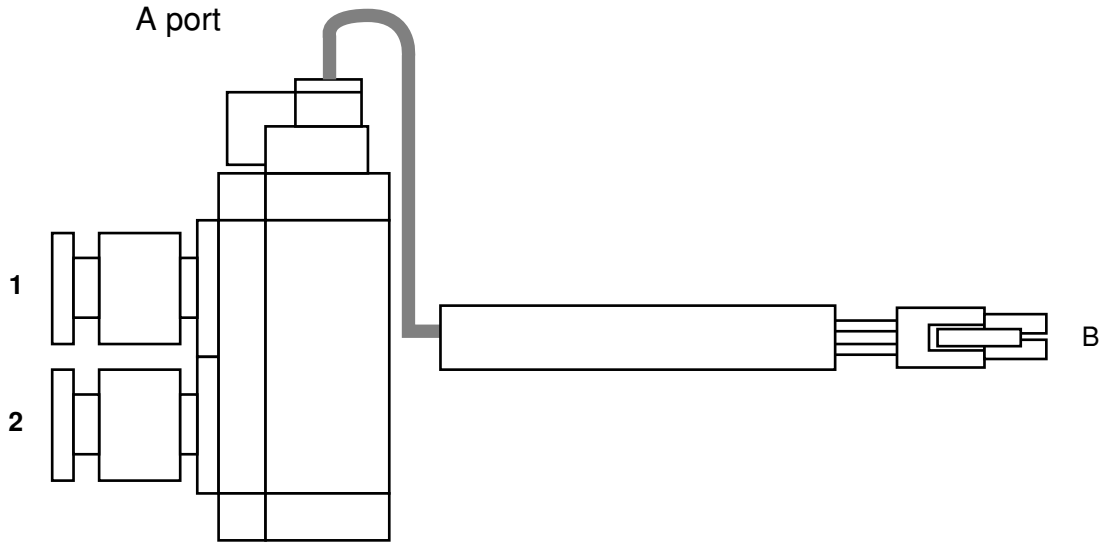
Fig. 7.15 Applicator Unit Disassembly Diagram

Fan Motor

The fan motors use suction to hold labels against the absorption plate until they are applied to a package.

Electromagnetic Valve

This electromagnetic valve controls the air supply to the air cylinder that pushes the labeling arm downward. The electromagnetic valve also controls the air supply that moves the labeling arm up.



A TERMINAL NUMBER	WIRE COLOR	B TERMINAL NUMBER
A PORT 1	RED	1
A PORT 2	BLACK	2

Fig. 7.16 Electromagnetic Valve

Air Cylinder

Adjustment Method

In the air cylinder there are adjustment screws for the cylinder speed controller, which adjusts the air amount, and air dumper, which adjusts for shock. Procedures for adjustment are listed below:

1 Cylinder push side dumper
2 Cylinder pull side dumper
3 Cylinder push side speed controller
4 Cylinder pull side speed controller

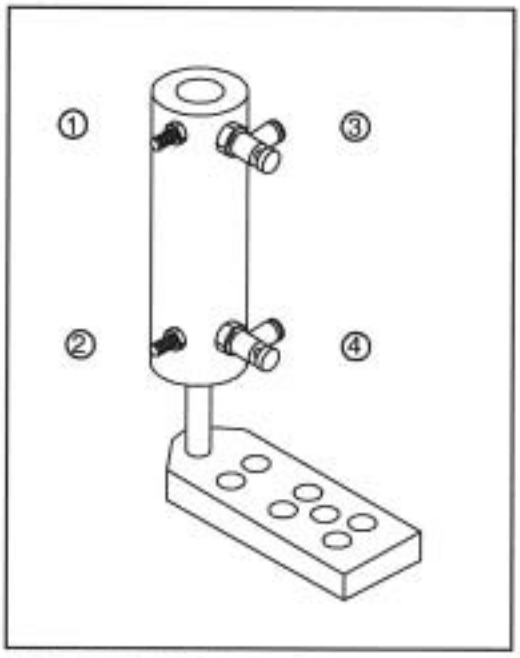


Fig. 7.17 Air Cylinder

Adjustment Procedures

1. For ① and ②, loosen the smaller nut of the double nut and turn adjustment screw counterclockwise as far as it will go.
2. Turn ① and ② clockwise three times and tighten double nut.
3. Loosen the nut for ③, turn the adjustment knob counterclockwise as far as it will go.
4. Turn nut for ③ 2.5 turns clockwise and tighten nut.
5. Loosen nut for ④ and turn counterclockwise until tight and fasten nut.

Air Adjustment

Use the regulator mounted on the weigh conveyor unit to adjust air pressure between 0.4 and 0.6Mpa.
Turn clockwise to raise air pressure.

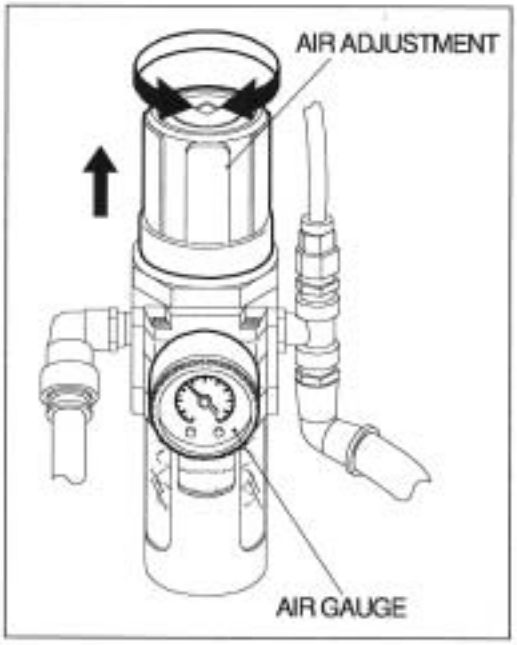


Fig. 7.18 Air Adjustment

Peeling sensor

The peeling sensor uses a reflective photosensor. Refer to Test Mode (Section 3.2.1 and 3.2.5) in this manual for verifying operation of peeling (“label taken”) sensor.

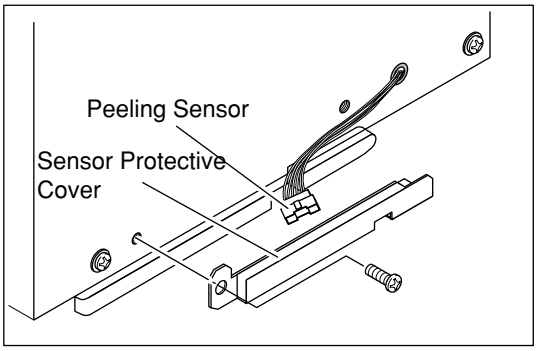
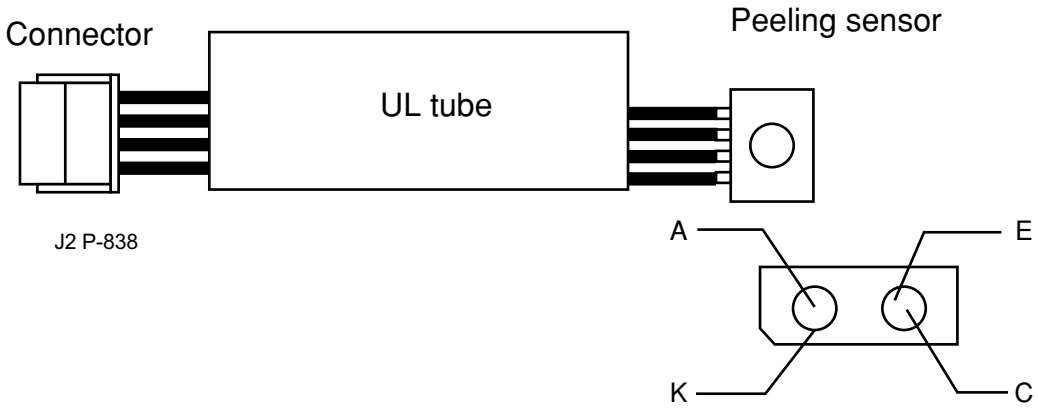


Fig. 7.19 Peeling Sensor



Connector No.	Connection	Terminal	Color
1	A	anode	green
2	K	cathode	blue
3	C	collector	purple
4	E	emitter	gray

Fig. 7.20 Peeling Sensor

7.4 Adjustment Position of the Label Applicator Unit

Misadjustment of the applicator unit can be a cause of misapplied labels. This section will explain the procedure for adjusting the position of the applicator unit.

1. Parallel adjustment
   Loosen the hinge screws (3) and the snap lock screw (2). Adjust the label applicator to be parallel with the peeling bar.
   Refer to Figure 7.21.

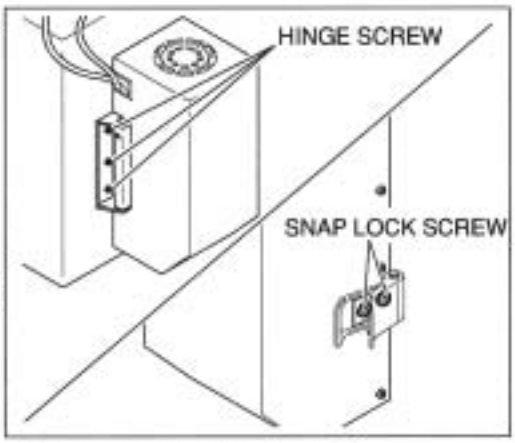


Fig. 7.21 Parallel Adjustment

2. Height Position Adjustment
   Loosen the hexagonal stop screw holding the shaft with an Allen wrench. Turn the shaft with a screwdriver and adjust the distance between the absorption plate and peeling bar within 0.5 to 2mm.
   Refer to Figures 7.22 and 7.23.

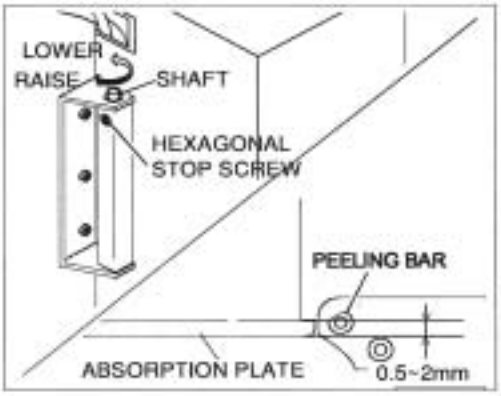


Fig. 7.22 Height Adjustment

3. Labeling Confirmation
   Issue labels and test application.
   If misapplication does not occur after issuing more than 50 labels, then adjustment is complete.

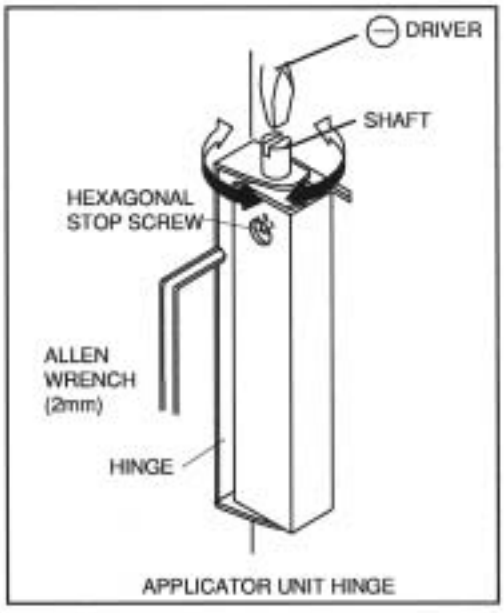


Fig. 7.23 Height Adjustment (detail)

7.5 MOVEMENT TEST

Labeling arm test and peeler sensor and label sensor test can be performed from the Test Mode.

Refer to ***Test Mode*** (Section 3.2.1) for starting test mode.

Labeling arm test

When the screen to the right is shown in the display, press (PRINT) to test the label applicator's movement.

Refer to TEST MODE (Section 3.2.2) for additional information.

Peeling Sensor Test

This tests the sensitivity of the peeling sensor and the label gap sensor. Refer to Test Mode (Section 3.2.5) for additonal information.

Note: Voltage values on the peeling sensor may be tested on the P-838* board, connector J2. Measure between pins 3 (positive) and 4 (negative).

Note: Use a label or white paper to test.

LABEL SENSOR	SENSOR DISPLAY VALUE	LABEL SENSOR RECEIVER VOLTAGE
BEAM REFLECTED	ABOVE 200 COUNTS	BELOW 1[V] DC
BEAM OPEN	BELOW 50 COUNTS	OVER 4 [V] DC

7.6 DISASSEMBLY DIAGRAM (STAND UNIT)

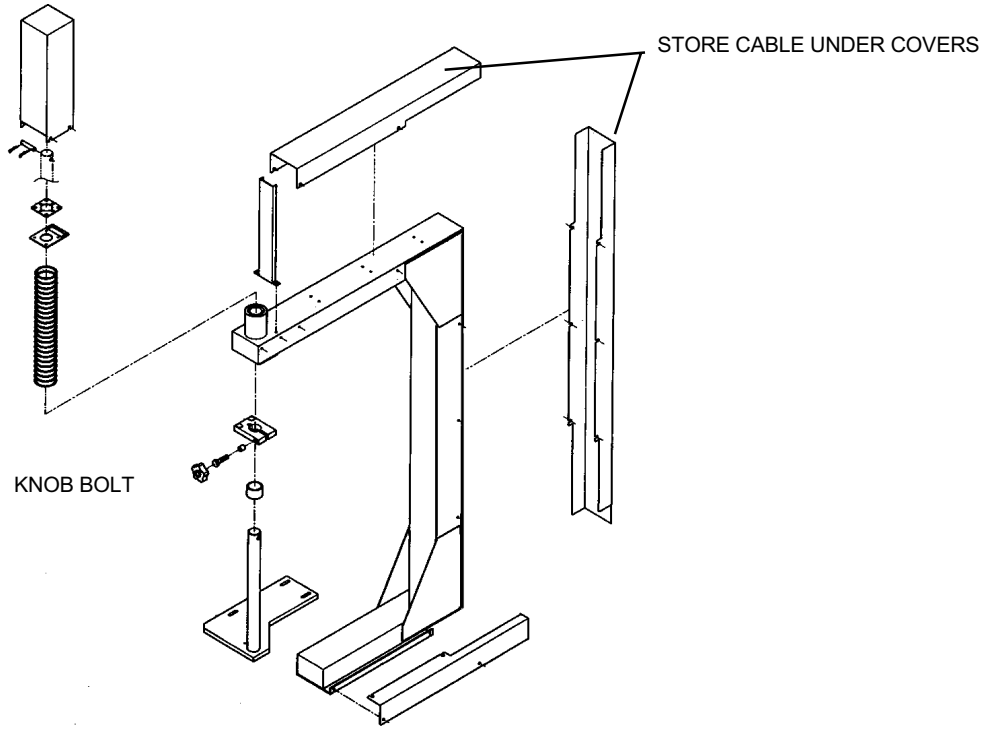


Fig. 7.24 Disassembly diagram (stand unit)

IMPORTANT NOTE – later versions of the WPL-3000 use a front mounted printer arm.

7.7 DISASSEMBLY DIAGRAM (PRINTER UNIT)

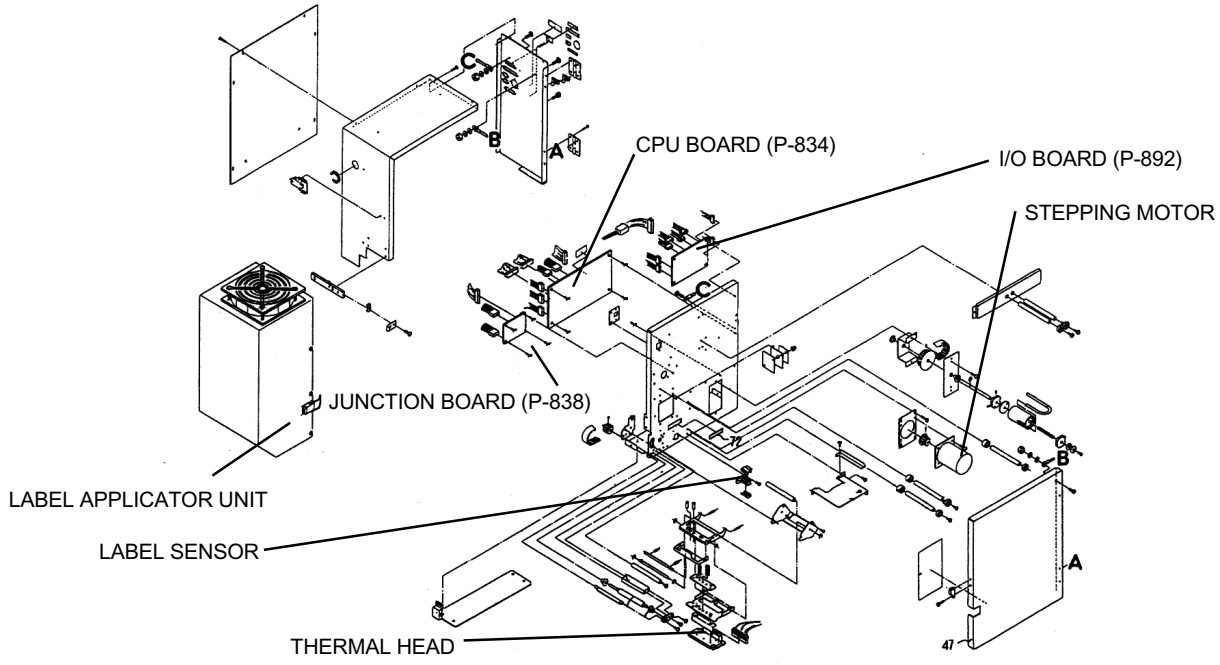


Fig. 7.25 Disassembly diagram (printer unit)

7.8 DISASSEMBLY DIAGRAM (LABEL APPLICATOR UNIT)

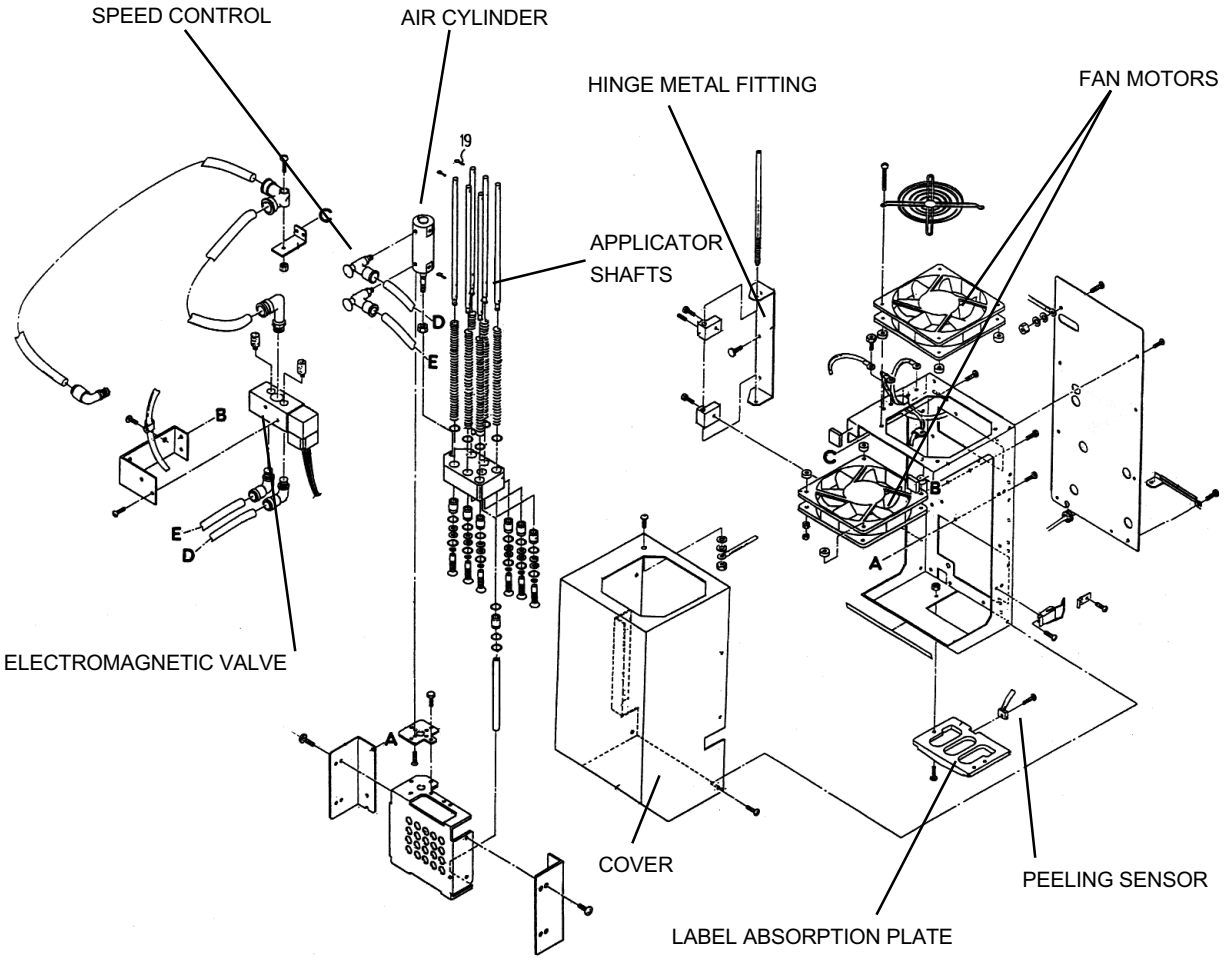


Fig. 7.26 Disassembly Diagram (label applicator unit)

Chapter 8
Weigh Conveyor

8.1 Weigh Conveyor Unit 8-2
8.2 Block Diagram 8-3
8.3 Electronic Components 8-4
8.3.1 Power Supply Unit 8-4
8.3.2 Drive Board (P-854) 8-5
8.3.3 Electromagnetic Valve 8-5
8.3.4 Air Cylinder 8-6
8.3.5 Application Timing Sensor 8-7
8.4 Elevator Check and Parts Adjustment 8-8
8.4.1 Weigh Conveyor. 8-8
8.4.2 Conveyor Fall Prevention Screw Adjustment 8-9
8.5 Disassembly Diagram 8-10

8.1 WEIGH CONVEYOR UNIT

When the scale has weighed a product, the weigh conveyor on the intake side rises to transport the weighed product to the printer unit where labels are issued and attached by the label applicator unit.

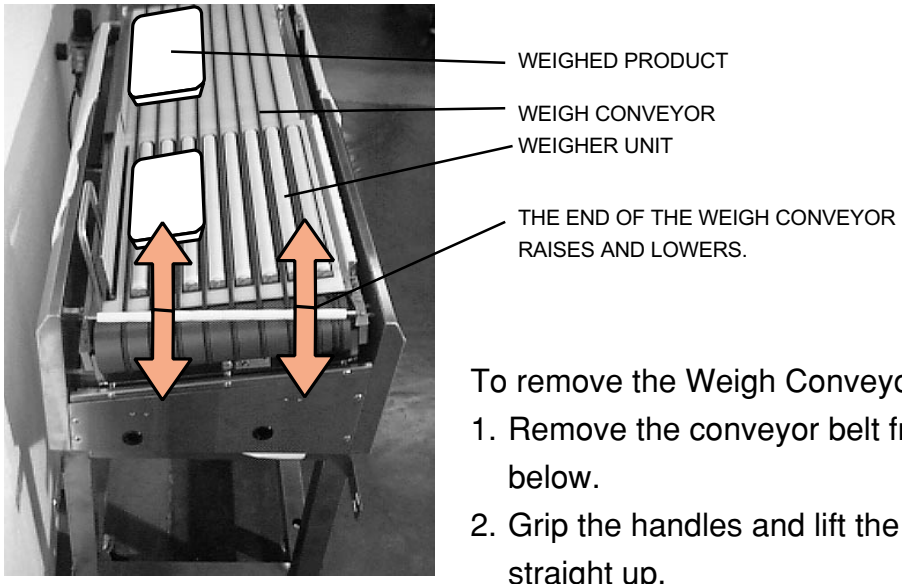


Fig. 8.1 Weigh conveyor unit

To remove the Weigh Conveyor Unit:

1. Remove the conveyor belt from pulley as shown below.
2. Grip the handles and lift the weigh conveyor straight up.

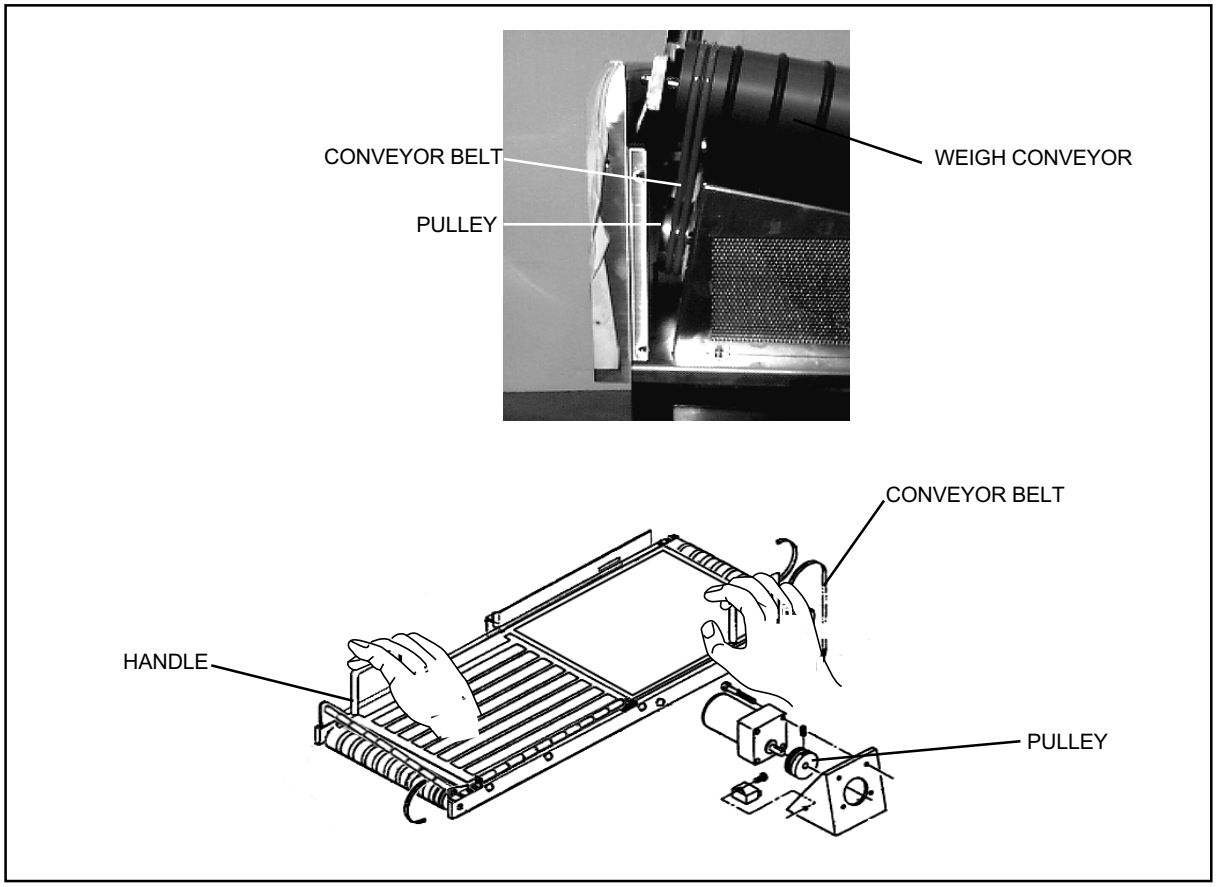


Fig. 8.2 Removing Weigh Conveyor

8.2 BLOCK DIAGRAM

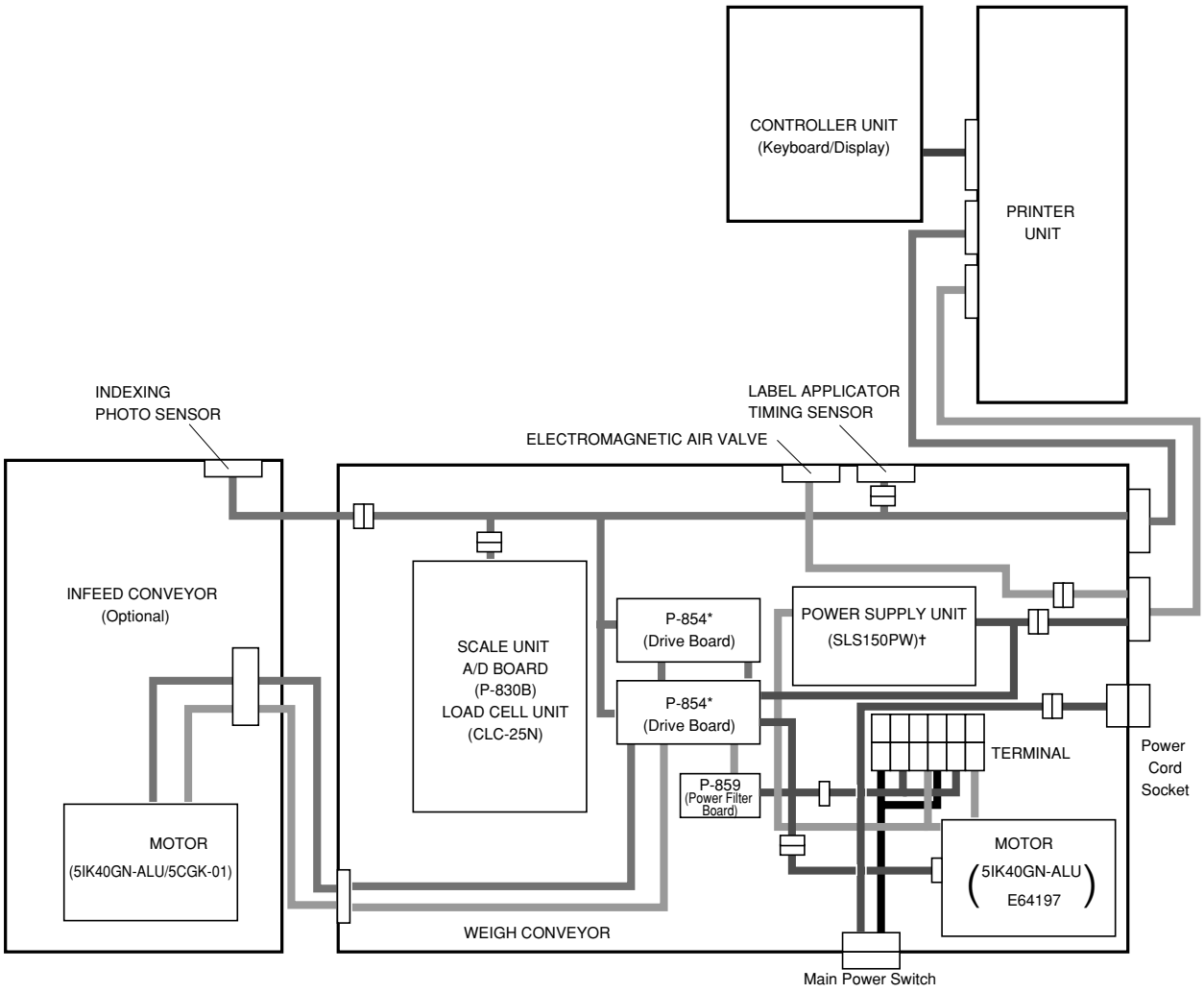


Fig. 8.3 Block Diagram

* Later designs incorporate a single P-854 Drive Board.

† Later designs incorporate two 24V DC power supplies:

LSF 100-24 (36-3409-01) – Main 24V DC

LDA 30F-24 (46-3180-09) – Fans

8.3 ELECTRONIC COMPONENTS

The control box inside the weigh conveyor contains the power supply, driver board, and other electronic components regulating the machine.

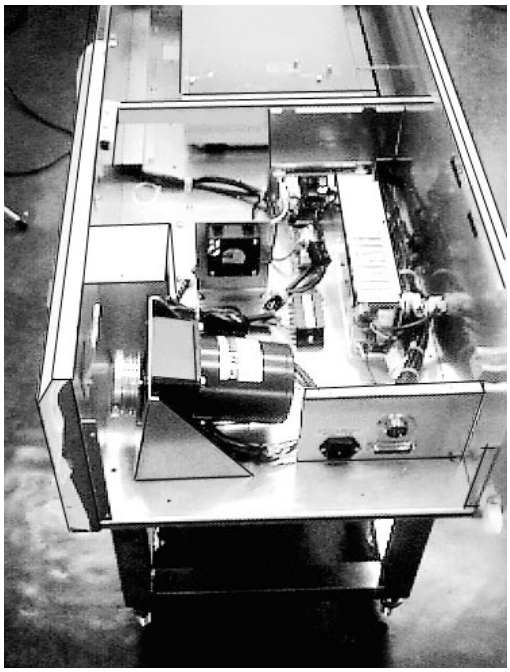


Fig. 8.4 Inside of Control Box

8.3.1 Power Supply Unit (SLS150PW)

The power supply unit supplies stable, 24V DC power to the controller unit, printer unit, and scale. Electrical power to IC's (5V) and the load cell (12V) is stepped down by regulators located on the main CPU board in the printer unit.

Note: Later designs use two 24V DC power supplies. See previous page.

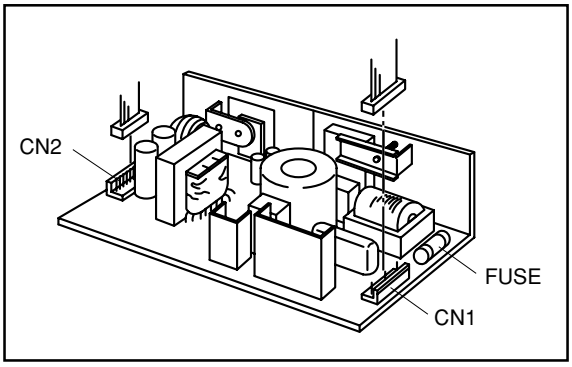


Fig. 8.5 Power Supply Unit

Product name	SLS150PW
Voltage input	85 to 132 [V] AC
Frequency	50/60 [Hz]
Voltage output	+24 [V] DC
Current output	6 [A]
Power output	144 [W]

CN2

No	Signals
1	+24 [V] DC
2	
3	
4	GND
5	
6	

8.3.2 Driver Board (P- 854)

The driver board controls the electromagnetic valve that switches air pressure to raise and lower the weigh conveyor. The drive motor for the infeed (optional) and weigh conveyors is also controlled by the driver board.

Control signals from the driver board are isolated by photocouplers.

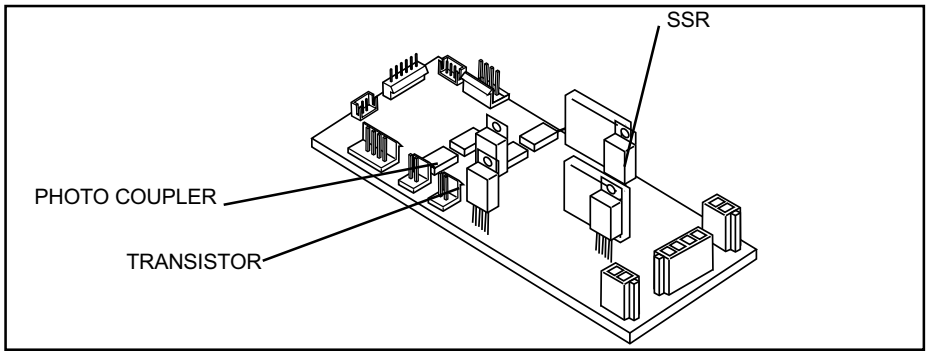


Fig. 8.6 Driver Board

This driver board (P-854) is installed in the control box located under the weigh conveyor.

8.3.3 Electromagnetic Valve

This electromagnetic valve drives the air cylinder which raises and lowers the weigh conveyor.

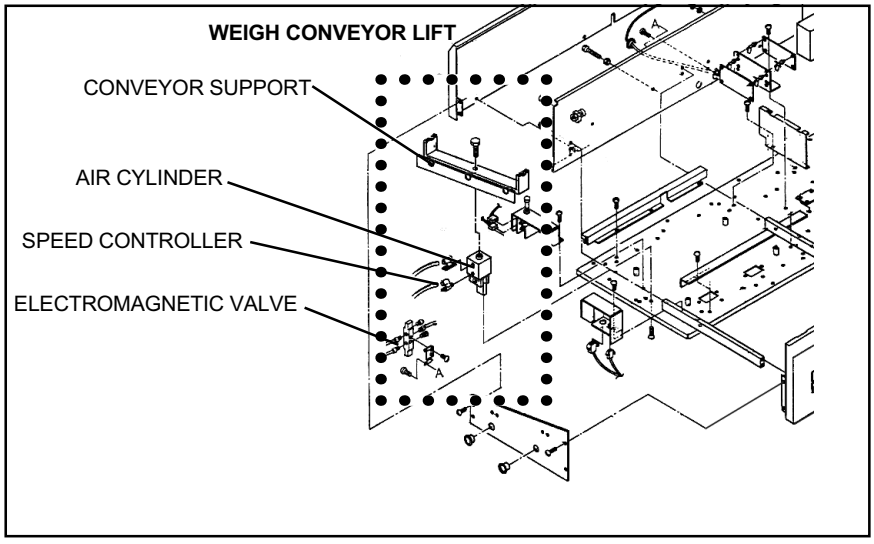
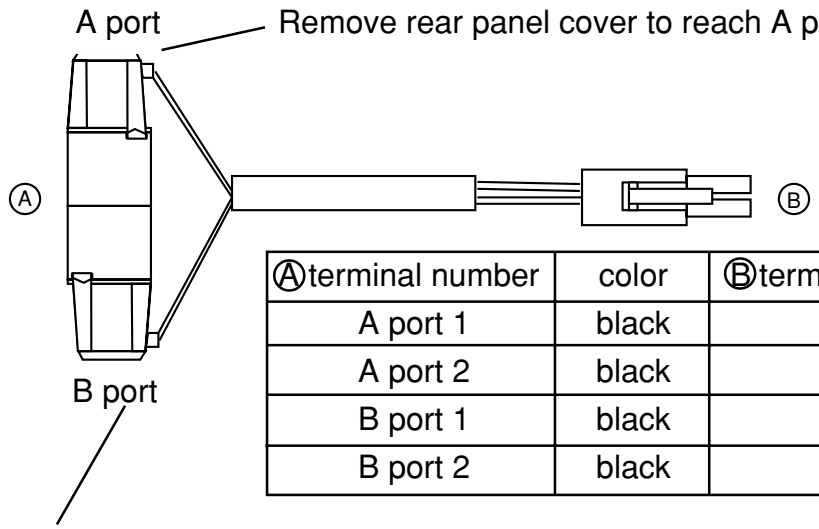


Fig. 8.7 Electromagnetic Valve



Ⓐterminal number	color	Ⓑterminal number
A port 1	black	1
A port 2	black	2
B port 1	black	3
B port 2	black	4

8.3.4 Air cylinder

A speed controller is installed on the air cylinder.

The following explains the method for adjusting the speed controller.

Raise Conveyor Speed Control

Turn the nut and knob clockwise as far as they will go.

Turn the knob counterclockwise three rotations and tighten the nut.

Lower Conveyor Speed Control

Turn the nut and knob clockwise as far as they will go.

Turn the knob counterclockwise four rotations and tighten the nut.

***For decreasing speed**

Turn knob clockwise.

***For increasing speed**

Turn knob counterclockwise.

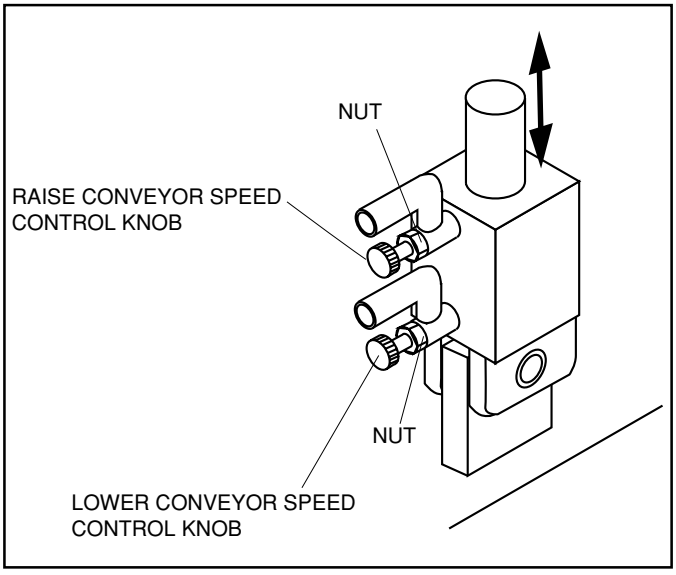


Fig. 8.8 Air Cylinder

8.3.5 Application timing sensor

This sensor detects products and initiates the timing for applying labels to the products. Two LEDs in the sensor confirm that the sensor is working properly.

TERMINAL NO.	COLOR	SIGNAL NAME
1	BROWN	ELECTRICAL POWER
2	BLACK	SIGNAL
3	BLUE	GROUND
4	OPEN	

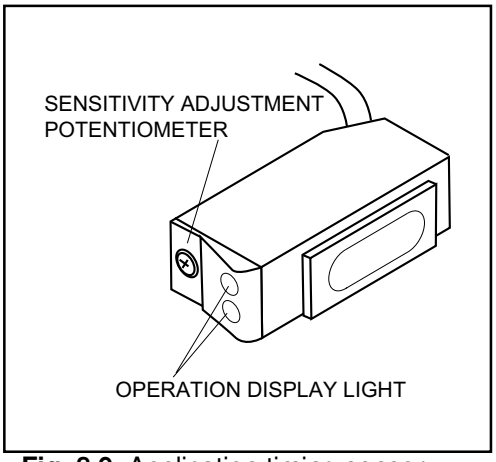
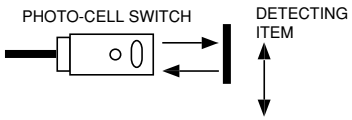
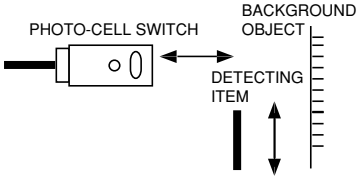
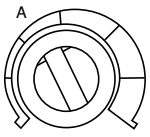
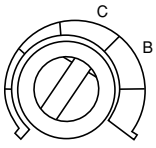
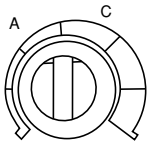


Fig. 8.9 Application timing sensor

The green LED indicates stability and should be on when power is supplied to the sensor. The orange LED is off when the sensor is aligned with the reflector and on when the reflected beam is blocked or out of alignment.

<Sensitivity Adjustment Method>

STEP	1 GRADUATION A	2 GRADUATION B	3 SETTING
CONDITION			———
SENSITIVE ADJUSTMENT VOLUME			
ADJUSTMENT PROCEDURE	Place the item to be detected in position. Start with the potentiometer fully CCW. Turn the potentiometer CW until the orange lamp is OFF. This is position A. If the orange lamp does not turn off, position A is fully CW.	Remove the detected item. From position A turn the potentiometer CCW until the orange lamp turns ON. This is position B. Turn the potentiometer CW until the orange lamp is OFF and the green lamp is fully ON. This is position C.	Set the potentiometer half way between position A and position C. Test the sensor operation. Check that the stable (green) lamp is lit in all cases.

CW - clockwise

CCW = counter clockwise

8.4 ELEVATOR CHECK AND PARTS ADJUSTMENT

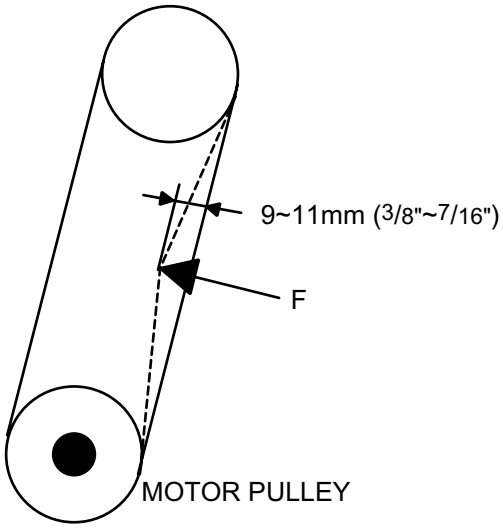
The elevator check for the weigh conveyor can be performed when the machine is in test mode.
Refer to ***Test Mode*** (Section 3.2.1 and 3.2.2) for procedure for starting test mode.

At step C01-06-00 press [PLU] to perform the elevator test.

8.4.1 Weigh conveyor

To confirm and adjust the tension of the conveyor drive belt, follow the procedures below:

1. Confirm belt tension.



When pressed with a force of 1kgf (2.2 LBF) in the middle of the belt, the belt should give 9-11mm (3/8in ~ 7/16in).

Fig. 8.10 Conveyor Belt

2. Belt tension can be adjusted by changing motor position.
   To adjust tension, loosen the four motor mounting bolts on the under side of the main body. Move the motor as needed.

Conveyor belts must be tight to prevent slipping. To adjust tension, loosen the roller screw and raise or lower the roller as shown in Fig. 8.11.

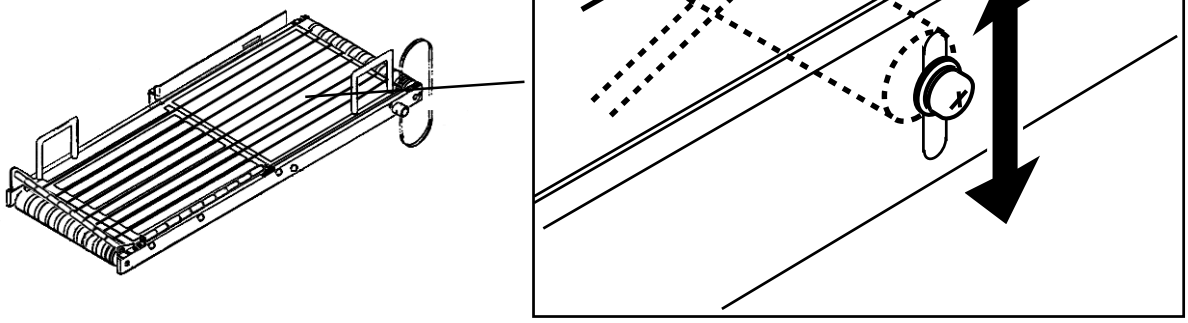


Fig. 8.11 Adjusting Belt Tension

8.4.2 Conveyor Fall Prevention Screw Adjustment

A conveyor fall prevention screw is shown in **Fig. 8.12**.

Adjust so that there is a 0.5mm (1/64 inch) gap between screw and brace.

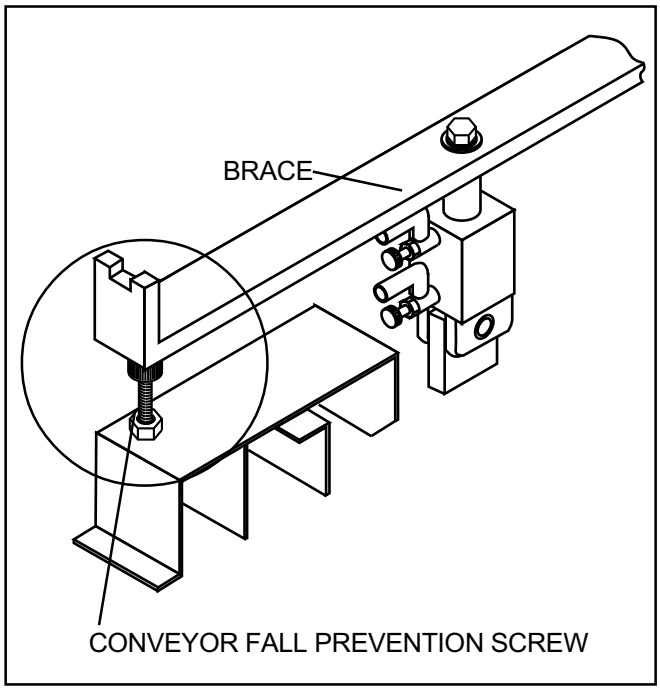
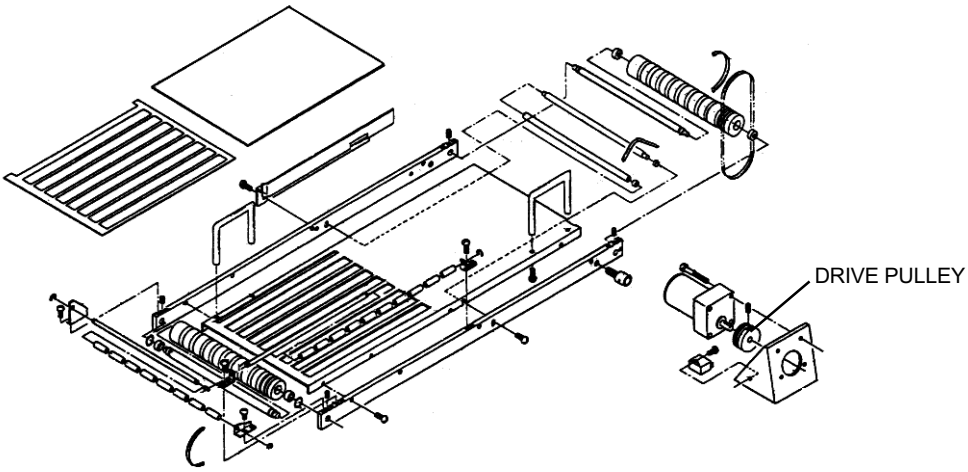


Fig. 8.12 Conveyor Fall Prevention Screw

8.5 DISASSEMBLY DIAGRAM



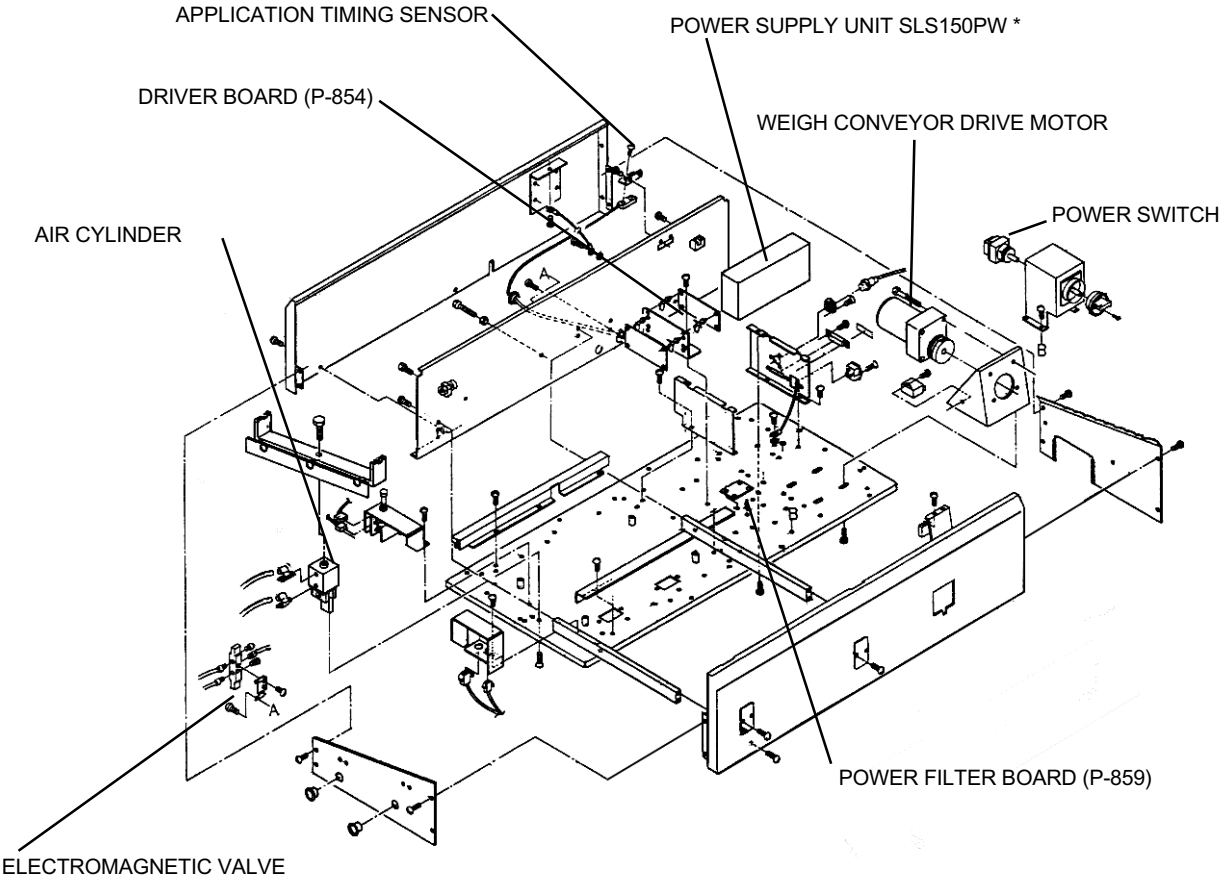


Fig. 8.13 Disassembly Diagram

* Later designs incorporate two 24 VDC power supplies.

Chapter 9
Troubleshooting

9.1 Periodic Parts Replacement 9-2
9.2 Breakdown and Countermeasure 9-3
9.3 Error Messages 9-4

9.1 PERIODIC PARTS REPLACEMENT (MTBF*)

This chapter describes periodic parts replacement, repair procedures, and error messages. The following parts need to be replaced periodically :

1. Thermal head (LH3124)
   Replacement period: When label distance reaches 60 km.
   Check this value in Test Mode C03-02 (Section 3.2.4)

2. Display (Display board)
   Expected life: over 30,000 hours, using standard rated drive.

3. Print roller
   Replacement period: When label distance reaches 300 km.
   Check this value in Test Mode C03-02 (Section 3.2.4)

*MTBF = Mean Time Between Failures

9.2 BREAKDOWN AND COUNTERMEASURE

SYMPTOM	CAUSE	COUNTERMEASURE
No electrical power to scale	1. Electrical plug is improperly inserted. 2. Fuse is blown 3. Defective power switch 4. Defective main board 5. Defective power unit	1. Reinsert power plug 2. Replace fuse 3. Check, replace power switch 4. Check, replace main board 5. Check, replace power unit
Enters test mode at start up	1. Defective keyboard 2. Defective main board	1. Check, replace keyboard 2. Check, replace main board
"We will serve you shortly" message remains displayed indefinitely.	1. External vibration 2. Defective load cell 3. Defective main board 4. Defective power supply unit	1. Check, change installation site 2. Check, replace load cell 3. Check, replace main board 4. Check, replace power unit
Displayed weight is different from actual weight; or displayed weight fluctuates	1. Weigh platter unit (rollers) is touching conveyor frame. 2. Contact is made between four-corner screw and limit bolt 3. Foreign matter under weigh platter or load cell 4. Defective load cell 5. Defective A/D board	1. Adjust weigh platter position 2. Perform four-corner test 3. Remove foreign matter 4. Adjust, replace load cell 5. Check replace main board
Certain segments do not light or are continuously lit.	1. Incomplete data sent 2. Defective main board 3. Defective display board	1. Check connectors 2. Check, replace main board 3. Check, replace display board
Ineffective key(s)	1. Loose connections 2. Defective keyboard	1. Check Junction Board P-887. 2. Check, replace keyboard
Registration data changes	1. Defective battery 2. External noise/static electricity 3. Defective main board	1. Replace battery 2. Check, change installation site 3. Check, replace main board
All display segments disappear during operation	1. Unstable voltage 2. Defective power supply unit 3. Defective display board 4. Defective main board	1. Check power source voltage 2. Check, replace power unit 3. Check, replace display board 4. Check, replace main board
Partial or no printing	1. Dirty thermal head 2. Defective thermal head 3. Defective thermal head cable 4. Defective main board 5. Defective power supply unit	1. Clean thermal head 2. Adjust, replace thermal head 3. Check, replace cable 4. Check, replace main board 5. Check thermal head applied voltage Check, replace power unit

9.3 ERROR MESSAGES

Note: To clear error messages from display press **CLR** key.

OPERATION			
Number	**Display**	**Cause**	**Solution**
2	CHARACTER OVER Err--02	Too many characters on one line in product description.	Edit product description by removing excess characters per line.
3	POP MESSAGE: OVER CHARACTER Err--03	Too many characters on first line for POP message to print.	Edit product description's first line by removing excess characters.
4	AD MESSAGE: OVER CHARACTER Err---04	Too many characters on one line in Ad message.	Edit Ad message by removing excess characters per line.
6	REG. CODE: OVER CHARACTER Err--06	Too many characters on one line in Reg. Code.	Edit Reg. Code by removing excess characters.
7	STORE NAME/ADDR.: OVER CHARACTER Err--07	Too many characters on one line in Store Name/ Address.	Edit Store Name/Address by removing excess characters per line.
8	LABEL END Err--08	• End of label roll. • Mis-threaded labels.	• Install new label roll. • Re-thread labels.
9	LABEL SIZE ERROR Err--09	• Incorrect labels installed in printer. • Label size settings are incorrect. • Mis-threaded labels.	• Install correct labels. • Check label size settings. • Re-thread labels.
10	EXCESS $ ON SCALE ITEM Err--10	Discount price is equal to or greater than the original price.	Check the discount price registration.
11	TABLE STRUCTURE CORRUPTION Err--11	Internal data base has become corrupted.	Perform memory clear.
12	MAX ITEM NUMBER OVERFLOW Err--12	Accumulated operator totals have exceeded 30 transactions or $100,000 per operator or 100 total transactions.	Clear operator totals by printing a total label. (Use the TOTAL key)
13	SAME OPR. TOTALING ON MAC. Err--13	Same operator number used within one second.	Wait and restart operation.
14	OPERATOR IN USE Err--14	Same operator number used within one second.	Wait and restart operation.

Note: To clear error messages from display press **CLR** key.

OPERATION			
Number	**Display**	**Cause**	**Solution**
17	WEIGHT IS OVER LIMIT Err--17	Package exceeds programed upper weight limit.	• Remove package from scale. • Change weight limit.
18	WEIGHT IS BELOW LIMIT Err--18	Package does not reach programmed lower weight limit.	• Remove package from scale. • Change weight limit.
19	LABEL REMAINING ON APPLICATOR Err--19	Label cannot be printed until previous label is removed from label applicator.	• Remover label from applicator. • Check/clean label sensor.
20	WEIGHT EXCEEDS CONVERYOR CAP. Err--20	Package weight exceeds conveyor capacity. Standard capacity is 10 pounds.	• Reduce weight of the package. • Change to Manual weighing/labeling with the PREPACK key.
40	MEMORY NOT INITIAL SET Err--40	Memory in “FAT” area has been corrupted.	Re-initialize all memory including RAM and E2ROM.
42	SYSTEM ERROR Err--42	Malfunction in main program: does not start up.	• Check possible CPU board failure. • Check firmware chips.
43	E2ROM NOT INITIAL SET Err-43	Memory in E2ROM has been corrupted.	Re-initialize with E2ROM clear.
50	NO POWER SCALE Err--50	A/D board is discon-nected or malfunctioning.	• Check A/D board cabling. • Replace A/D board.
51	SCALE ERROR Err--51	NV RAM (calibration data) in A/D board has been corrupted.	Recalibrate scale.
56	REMOVE ITEM ON THE PLATTER Err--56	Scale is unstable or was powered up with some object on the platter.	• Remove internal/ external cause of instability. • Power up the scale with nothing on the platter.
57	REMOVE ITEM ON THE PLATTER Err-57	Scale was powered up with some object on the platter.	Power up the scale with nothing on the platter.

Note: To clear error messages from display press **CLR** key.

OPERATION			
Number	**Display**	**Cause**	**Solution**
66	MEMORY AREA OVERFLOW Err--66	Transaction results cannot be written in to memory due to corruption of Totals area. ■ Incorrect Memory clear procedure. ■ Incorrect Master Satellite setup procedure ■ Noise from RS-232 communications with PC.	• Clear scale totals. • Power scale off ater RAM clear - do NOT use RESET key. • Re-initialize Master Satellite system.
68	RESEND RESULT DATA Err--68	Unsuccessful transmission of transaction results to Total area of memory.	• Press **PLU** key to resend data. • Press **VOID** key to cancel transmission.
203	PRINTER POWER-OFF OR NOT CONNECT Err--203	No communication with second printer at initial power up of main unit.	• Turn on second printer unit before main unit. • Check cabling between printers.
204	PRINTER COMMUNICATION ERROR Err--204	No communication with second printer.	• Check power at second printer. • Check cabling between printers.
—	CHARACTER BUFFER OVER	Too many characters per PLU.	Check PLU name registration area.
—	CHARACTER DOTS OVER	Too many characters per line.	Check PLU name registration area.

Note: To clear error messages from display press **CLR** key.

SYSTEM COMMUNICATIONS			
Number	**Display**	**Cause**	**Solution**
9300	SYSTEM ERROR (CHECK CABLE) Err--oFFLin	• Master Board malfunction. • Faulty cable connections.	• Check Master Board, replace if necessary. • Check all cable connections. • Check for incorrectly wired cables.
9305	SAME OPR. TOTALING ON MAC. Err--9305	Same operator number used within one second.	Wait and restart operation.
9307	SAME OPR. PROCESSING ON OTHER Err--9307	Same operator number used within one second.	Wait and restart operation.
9309	ERROR ON COMM. CROSSOVER Err--9309	Data transfer duplication error - same data was sent twice.	Press **CL** key to reset.
9311	MAX ITEM NUMBER OVERFLOW Err--9311	Accumulated operator totals have exceeded 30 transactions or $100,000 per operator or 400 total transactions.	Clear operator totals by printing a total label. (Use the TOTAL key).
9316	MASTER IS OFF LINE Err--9316	• Master scale is Off Line. • Master scale is in Totals Mode or Test Mode.	Return master scale to On Line mode.
9330	COMM. ERROR ON RESULT TRANSFER Err--9330	Satellite cannot report Totals data back to Master scale.	• Check Master Board, replace if necessary. • Check all cable connections. • Check for incorrectly wired cables.
9330	SYSTEM ERROR (CHECK MASTER SCALE) Err--9330	Satellite does not receive requested data from Master Board.	• Check Master Board, replace if necessary. • Check all cable connections. • Check for incorrectly wired cables.

Note: To clear error messages from display press **CLR** key.

SAVE & LOAD WITH IF-21FD FLOPPY DISK UNIT			
Number	**Display**	**Cause**	**Solution**
2	Err 2	Floppy disk does not verify.	• Reload data to/from disk. • Create new master disk.
3	Err 3	• No disk in IF-21FD floppy disk recorder. • Bad IF-21FD disk drive.	• Install DS, DD floppy disk into recorder. • Repair IF-21FD.
4	Err 4	Cannot record to floppy disk because it is write protected.	Switch write protect tab on the disk to correct position.
5	Err 5	• Attempting to overwrite existing file on floppy disk. • Attempting to receive, verify, or delete a nonexistent file on floppy disk.	• Select an unused file number. • Select an existing file number.
6	Err 6	IF-21FD floppy disk unit not configured correctly.	• Check that only DIP switches 2 and 5 are in the down position. • Check that the IF-21FD has the latest firmware version (J-209N). • Use 9-pin cable, not 25-pin cable.
7	Err 7	Parity error in communication protocol.	Check scale CPU board.
8	Err 8	Floppy disk memory overflow.	• Restart with a blank floppy disk. • Erase unused files from floppy disk.
9	Err 9	Operation error.	Begin SAVE/LOAD procedure again following correct procedure. (Refer to Section 3.2.13 if needed).
10	Err 10	Floppy disk format error.	Reformat floppy disk.
66	Err 66	• Data on disk is corrupted. • Scale memory is corrupted. • File is too large for scale memory. • Attempting to receive incompatible data file.	• Create new master disk. • Clear scale memory, reload disk. • Reduce file size and reload into scale's memory. • Select and receive only data files from similar scales.
73	Err 73	• IF-21FD floppy disk recorder not connected. • Incorrect disk format.	• Power off scale and connect IF-21FD floppy disk recorder. • Reformat floppy disk.

Chapter 10
Load Cell Unit

10.1 Location of Main Parts. 10-2
10.2 Replacing the Load Cell Unit 10-3
10.3 Span Calibration Adjustment 10-6

10.1 LOCATION OF MAIN PARTS

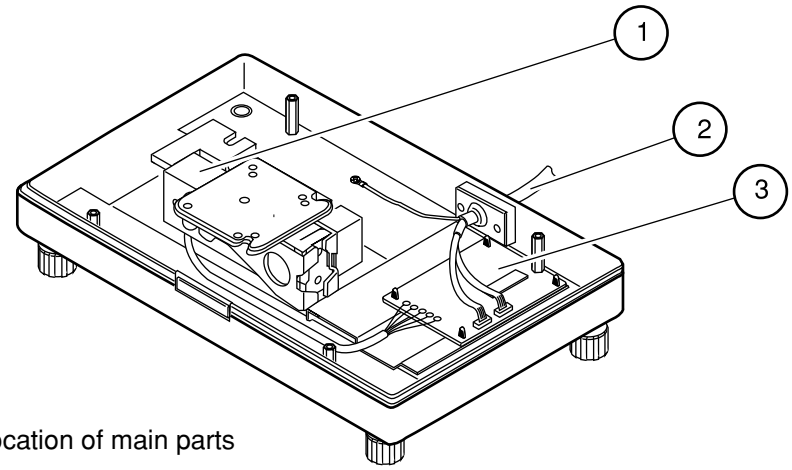


Fig. 11.1 Location of main parts

PARTS NO.	PARTS NAME
1	L C UNIT C L C－2 5 N
2	HARNESS C 3 ：SCALE
3	A／D BOARD P W B ： 8 3 0 B

10.2 REPLACING THE LOAD CELL UNIT

1. Removing the weigh conveyor and roller unit

Refer to ***Weigh Conveyor Unit*** (Section 6.5) for detaching weigh conveyor.

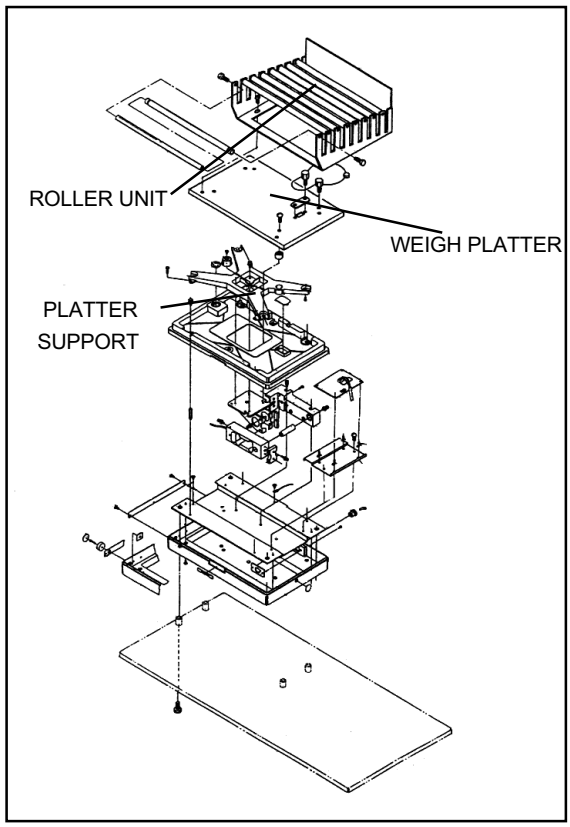


Fig. 11.2 Scale unit

2. Cutting seal wire and removing weigh platter

(1) Cut seal wire.
(2) Unfasten seal screws (screw #1, screw #2) and remove weigh platter.

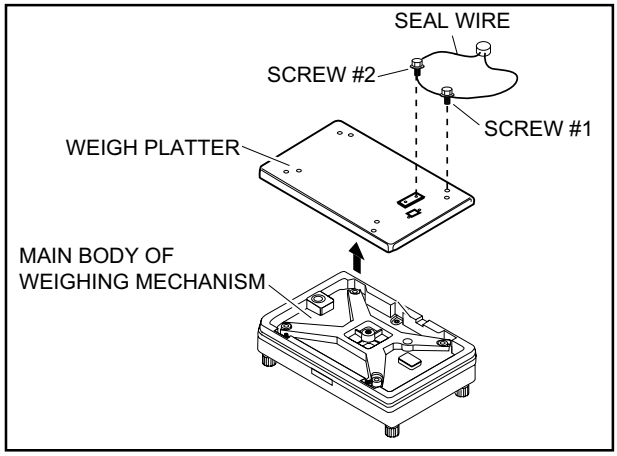


Fig. 11.3 Seal wire and weigh platter

CAUTION

Do not cut the base seal wire unnecessarily since it is necessary to replace the sanction seal when the seal wire is cut.

3. Removing the platter support.

(1) Unfasten the 4 screws holding the platter support.

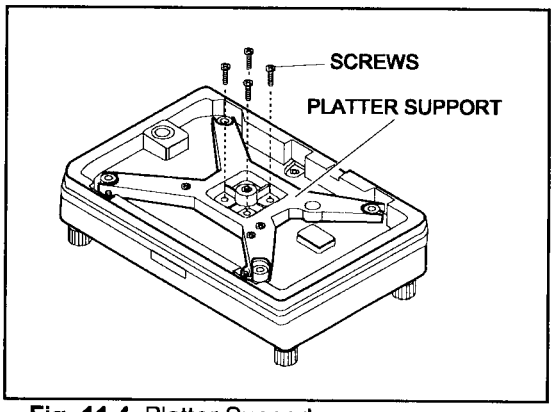


Fig. 11.4 Platter Support

4. Removing the weigh mechanism cover.

(1) Unfasten the 4 screws holding the weigh mechanism cover.

(2) Slowly lift the weigh mechanism cover.

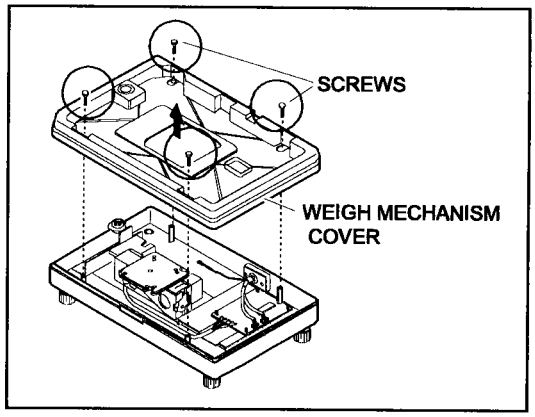


Fig.11.5 Weigh mechanism cover

5. Removing the A/D board*.

(1) Disconnect connector #1 and #2 from the A/D board.

(2) Unsolder the load cell cable connections (5 places).

(3) Remove the A/D board locking supports (4 places).

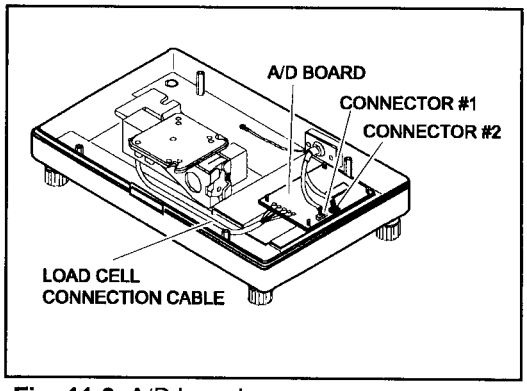


Fig. 11.6 A/D board

*Be sure the main power is turned off and the power cord is removed.

6. Removing load cell unit

(1) Unfasten the load cell unit screws (3).
(2) Remove the load cell unit.

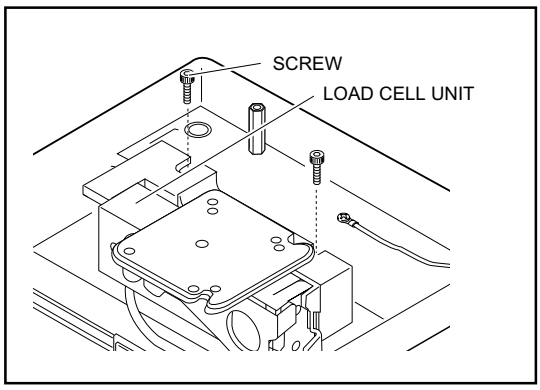


Fig. 11.7 Load cell unit

The load cell cell cable is soldered to the board.
Be careful to reattach the load cell cable wires to the correct position.

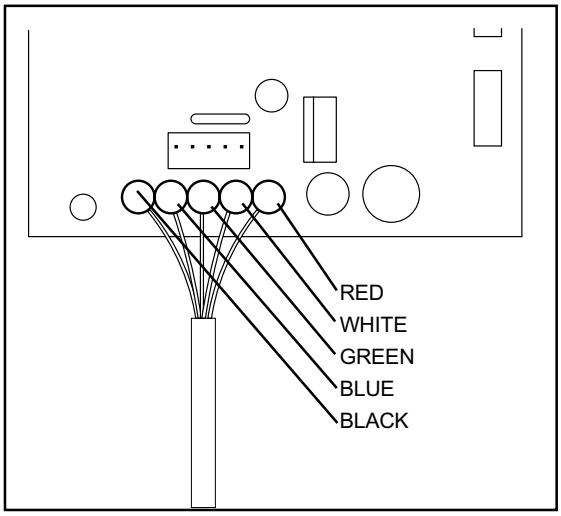


Fig. 11.8 Load cell output cable

7. Confirming the four-corner limit screws after replacing load cell

- With the roller unit, weigh platter, and platter support installed, adjust and confirm position of four-corner limit screws.
- Place a weight equal to scale capacity plus 10% (33 lb) on each corner. Rotate each of the four-corner limit screws so that they just make contact with the limit bolts when the weight is loaded (“Gap” in Fig. 11.9).
- The four-corner limit screws protect the load cell from being damaged when an excessive load is applied to the weigh platter.
- Adjustment of the four-corner limit screws is necessary when the load cell has been replaced or the main body has received a jolt.

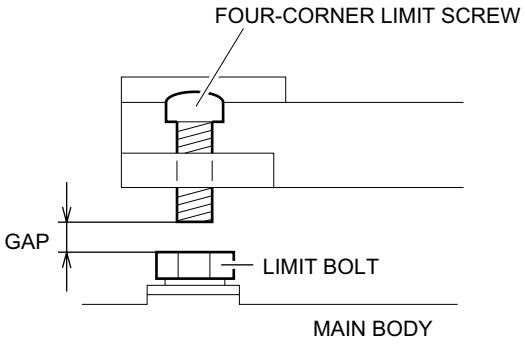
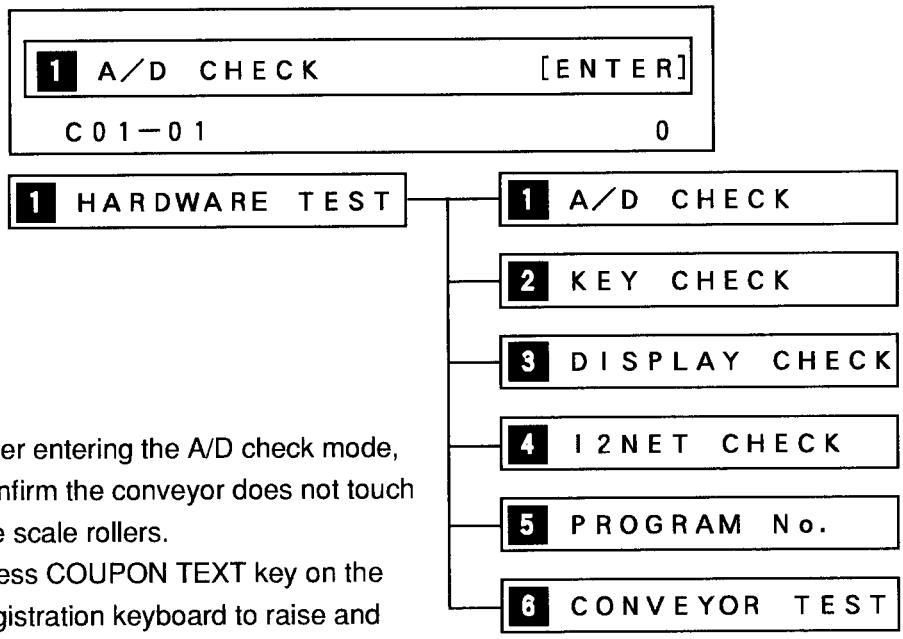


Fig. 11.9 Confirming the four-corner limit screws

10.3 SPAN CALIBRATION ADJUSTMENT

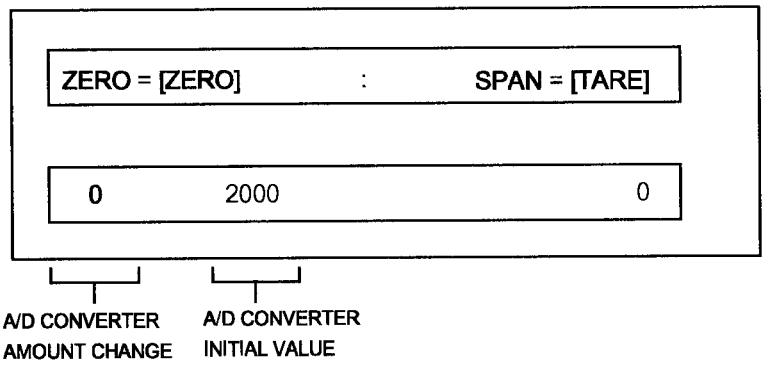
Span Adjustment is performed in test mode.
Refer to Test Mode (Sec. 3.2.1 and 3.2.2) in this manual for procedures for starting test mode.



Note: After entering the A/D check mode, confirm the conveyor does not touch the scale rollers.
Press COUPON TEXT key on the registration keyboard to raise and lower the conveyor. Air must be supplied to move the conveyor.

Adjustment Procedure

Confirm the present setting.



Span Adjustment Flowchart

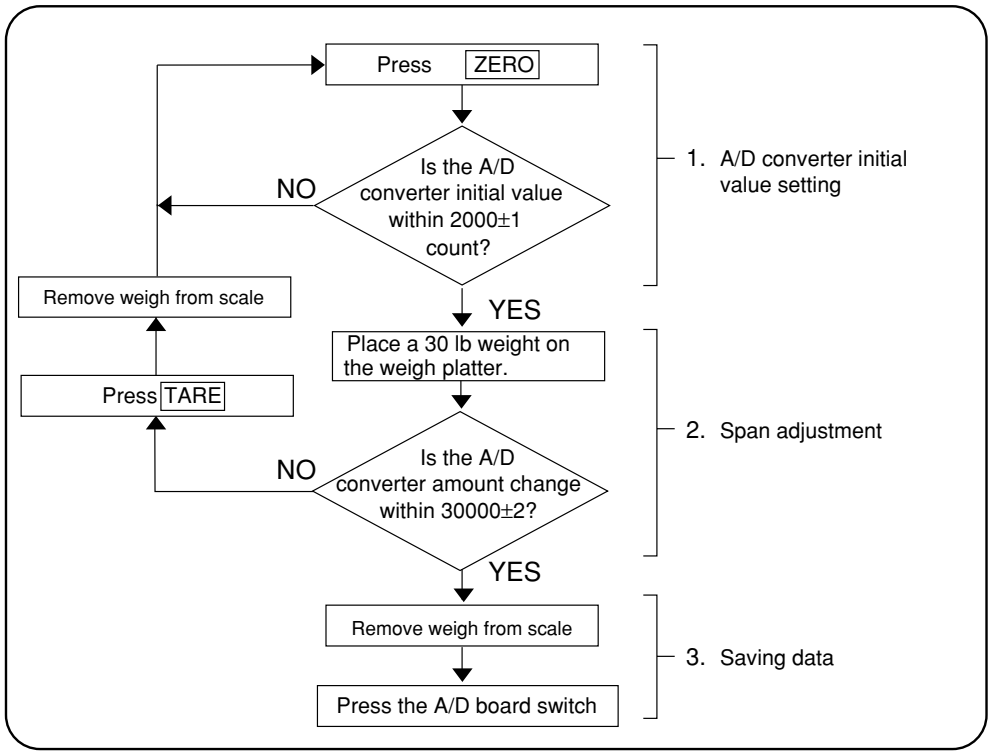


Fig. 11.10 Span Flowchart

1. A/D converter initial value
   Press (ZERO) with no weight on the scale rollers.
   The A/D converter initial value is displayed in the unit price column.
   Confirm that the initial value is within 2000±1 count.
   If it is within 2000±1 count, perform span adjustment.
   If it is not within 2000±1 count, press (ZERO) and confirm.

2. Span Adjustment
   Place 30 lbs of calibrated weights on the scale rollers.
   The A/D converter weight change is shown in the weight column.
   Confirm that the span adjustment is within 30000±2 count.
   If it is within 30000±2, save data. If span adjustment is not within 30000±2 count, press (TARE) and remove the weights.
   Repeat the procedure beginning with step *1. A/D converter initial value*.

3. Saving data
   Save data to E^2ROM.
   Remove weights from scale rollers and remove the roller unit.
   Remove cap and press the memory switch on the A/D board.
   See Fig. 11.11.

4. Completion

Replace the cap and scale roller unit.

5. Check

After reassembly, recheck scale calibration and return to zero. Also, verify clearance by pressing COUPON TEXT key to activate the conveyor.

If A/D counts are not the same when the conveyor is up and down, check for binding between conveyor and scale rollers.

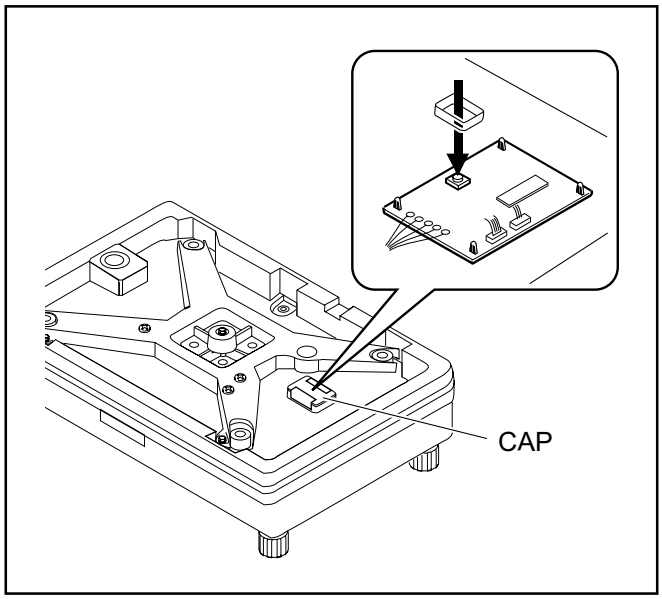


Fig. 11.11 A/D board memory save switch

CAUTION

Do not press the switch with a screw driver or other metallic object. Do not cut the base seal wire unnecessarily since it is necessary to replace the sanction seal when the seal wire is cut.

Appendix

A.1 Installation Notes. A-2
A.2 Label Format Worksheets A-9

A.1 INSTALLATION NOTES

WPL-3000 SYSTEM COMPONENTS

Standard

Main Conveyor Body
Printer Unit
Printer Arm
Display/Keyboard Unit
Display/Keyboard Mount Kit
Power cord
Stand w/ telescoping legs, leveling legs, casters, and rubber anti-vibration strips

Optional

Roller Conveyors: Infeed & Exit
Power Exit Conveyor
Power Infeed Conveyor w/ Stand (I-Line only)
Rotary Catch Bin
Air Compressor

INSTALLATION

Stand Assembly

1. Secure rubber strips to stand using silicone or double backed tape.
   Note: Be sure to align holes in strips with holes in stand.

WPL Assembly

1. Place the WPL on the stand.
   Note: Main power switch faces the side with printer arm mounting plates.
2. Bolt WPL to stand: 4 corners from under side.
   Note: Bolts provided in stand hardware kit.
3. Attach infeed roller assembly brackets (“L” configuration only).
4. Bolt printer arm to stand: 6 bolts.
   Note: Bolts provided in stand hardware kit.
5. Bolt printer unit to printer arm.
6. Adjust stand to proper height.
7. Level stand and tighten all leg extensions and leveling feet in place.
   Note: Be sure to also tighten set screws in each leg.
8. Connect air lines.

Roller Assemblies

1. Attach infeed roller assembly (“L” configuration only).
2. Attach exit roller assembly.

Infeed Power Conveyor

1. Mount infeed conveyor to stand.
2. Connect 4 cables to WPL: remove WPL infeed end panel to access connections.
3. Set height and level conveyor.

Exit Power Conveyor

1. Mount exit conveyor bracket to WPL stand: 4 bolts.
2. Mount exit conveyor to bracket: 4 bolts from underside.
3. Connect cable to WPL: located behind the WPL infeed end panel.

Programming

1. Install and configure labels.
2. Load PLU file.

General Settings

ROM Switches [See page A-7 for details]

a. Select conveyor timeout, switch 0039.
b. Select if shelf life calculations will count today as one day, switch 003B.
c. For use with an automatic wrapper set the following switch values:
    i. 003C = 03
    ii. 003D = 03
    iii. 003E = 03

Note: These changes MUST be registered to the A/D Board NV RAM.

Weight Calibration

Follow the procedure in Section 10.3, Span Calibration Adjustment.

Note: Take care that the weights touch only the scale rollers and backstop.

Conveyor Timing

Follow the setup sequence listed below to optimize the conveyor timings.

"L" Configuration

1. Memory Clear: TEST MENU C02 [Section 3.2.3]
   a. C02-01 – Ram Clear
   b. C02-02 – E^2ROM Clear
   c. C02-03 – Test Set (Optional)
2. Set "L" Configuration: TEST MENU C06 (ROM Switch) [Page A-7]
   Set address 003A = 01
3. Assign ROTATE function key: TEST MENU C10 [Section 3.2.11]
   Assign PF4 = 19 (rotate)
4. Label Format
   a. SETUP MENU b01 [Section 4.2.1]
      i. Select format number: b01-01
      ii. Set text area: b01-06
      iii. Set label length + gap: b01-07
      iv. Set Sensor 2 (b01-09) to ensure label comes free of the backing paper
   b. TEST MENU C07 [Section 3.2.8]
      i. Modify label format as needed
5. Set Applicator Stroke: SETUP MENU b16-03 [Section 4.2.11]
   a. Applicators
      i. Standard = 08 (typical setting)
      ii. Extended = 05 (typical setting)
   b. Test and adjust as necessary for maximum travel but no delay in up stroke
6. Delay Package on Scale: SETUP MENU b16-01/b16-02 [Section 4.2.11]
   a. Set b16-01 = 100
   b. Set b16-02 = 100
   Note: These delays are necessary to set the correct times for the next step.
7. Label Placement - Standard: SETUP MENU b16-04 [Section 4.2.11]
   a. Test label placement
   b. Adjust b16-04 setting as needed
      i. a lower value moves the label to the leading edge of the package
      ii. a higher value moves the label to the trailing edge of the package
8. Set Delay of package on scale to minimum: SETUP MENU b16-01/b16-02 [Section 4.2.11]
   a. Test delay

   b. Set b16-01 to the minimum time that allows the label to be completely printed
   c. Set b16-02 by the same method.
9. Switch to “Rotate” label position
   a. Turn the printer 90 degrees
   b. Press the ROTATE function key
10. Label Placement - 90 degree Placement: SETUP MENU b16-06 [Section 4.2.11]
   a. Test label placement
   b. Adjust b16-06 setting as needed
      i. a higher value moves the label to the trailing edge of the package
      ii. a lower value moves the label to the leading edge of the package
11. Lower Conveyor as soon as possible: SETUP MENU b16-07 [Section 4.2.11]
   a. Test lowering time of conveyor using the widest tray available
   b. Adjust b16-07 as low as possible to allow the tray to be moved off the scale area

   Note: Lowering quickly ensures the scale is ready to accept the next package.

“ I ” Configuration

1. Memory Clear: TEST MENU C02 [Section 3.2.3]
   a. C02-01 – Ram Clear
   b. C02-02 – E^2ROM Clear
   c. C02-03 – Test Set (Optional)
2. Set “ i ” Configuration: TEST MENU C06 (ROM Switch) [Page A-7]
   Set address 003A = 00
3. Assign ROTATE function key: TEST MENU C10 [Section 3.2.11]
   Assign PF4 = 19 (rotate)
4. Label Format
   a. SETUP MENU b01 [Section 4.2.1]
      i. Select format number: b01-01
      ii. Set text area: b01-06
      iii. Set label length + gap: b01-07
      iv. Set Sensor 2 (b01-09) to ensure label comes free of the backing paper
   b. TEST MENU C07 [Section 3.2.8]
      i. Modify label format as needed

5. Set Applicator Stroke: TEST MENU b16-03 [Section 4.2.11]
   a. Applicators
      i. Standard = 08 (typical setting)
      ii. Extended = 05 (typical setting)
   b. Test and adjust as necessary for maximum travel but no delay in up stroke
6. Set Conveyor timing to Lower packages on to Scale: SETUP MENU b16-05 [Section 4.2.11]
   a. Test lowering time of conveyor using the widest tray available
   b. Adjust b16-05 such that trays are fully on the scale roller assembly
      i. a higher value provides the package more travel on to the scale
      ii. a lower value provides the package less travel on to the scale

   Note: If sensors are mounted on the leading edge of the WPL-3000, typical setting is 0.
7. Delay Package on Scale: SETUP MENU b16-01 [Section 4.2.11]
   a. Set b16-01 = 100
   b. Set b16-02 = 100

   Note: These delays are necessary to set the correct times for the next step.
8. Label Placement - Standard SETUP MENU b16-04 [Section 4.2.11]
   a. Test label placement
   b. Adjust b16-04 setting as needed
      i. a lower value moves the label to the leading edge of the package
      ii. a higher value moves the label to the trailing edge of the package
9. Set Delay of package on scale to minimum: SETUP MENU b16-01/b16-02 [Section 4.2.11]
   a. Test delay
   b. Set b16-01 to the minimum time that allows the label to be completely printed
   c. Set b16-02 by the same method
10. Switch to “Rotate” label position
    a. Turn the printer 90 degrees
    b. Press the ROTATE function key
11. Label Placement - 90 degree Placement: SETUP MENU b16-06 [Section 4.2.11]
    a. Test label placement
    b. Adjust b16-06 setting as needed
       i. a higher value moves the label to the trailing edge of the package
       ii. a lower value moves the label to the leading edge of the package

ALTERING WEIGHT STABILIZATION PARAMETERS

Enter Test Mode by turning the **POWER-ON** while holding down the **1** key.
Use **DOWN ARROW** to move to the desired menu option then press **ENTER**.

Test Menu 1: HARDWARE TEST (Step C01-01)

1. Make changes in Test Mode 6: ROM SWITCH to addresses 003C, 003D, 003E (see table below for details).
2. Enter the weight calibration step C01-01 [A/D CHECK].
3. Press **ZERO** to set counts to 0 and 2000.
4. Press **FEED** to send ROM SWITCH data to the A/D board.
5. Press the Memory Switch on the A/D board (same as during calibration).
6. Exit Test Mode, turn WPL off/on and check operation.

Test Menu 6: ROM SWITCH

Use **RIGHT ARROW** to move to the desired address. Enter the new data then press **ENTER**.

Address	Default	Description
0039	00	Conveyor "Time Out" 00 = No, Conveyor runs continuously. 01 = Yes, Conveyor stops after 10 minutes of non-use.
003A	01	Configuration 00 = Straight through (In-Line). 01 = "L" shape.
003B	00	Shelf Life 00 = Today counted as one day. 01 = Today not counted (add one day to shelf life).
003C*	04	Stabilization Lock Count Number of samples that must match before weight reading is accepted. **Note:** Decrease the value for faster operation.
003D*	02	A/D Conversion Speed 01 = Slow: slower throughput, most reliable. 02 = Medium: standard. 03 = Fast: fastest throughput.
003E*	02	Width of Stabilization Window Difference in number of internal counts from previous sample that will be accepted as the same weight. *Example:* 02 = ±2 count difference from last sample. **Note:** Increase the value for faster operation.

* These changes must be registered to the A/D Board NV RAM.
See step C01-01 above for the procedure.

* Typical "Speed Up" settings are: 003C = 03, 003D = 03, and 003E = 03.

PROGRAMMING MENU

Access the Programming Mode by entering **9000** then pressing **MODE** key.
Use **DOWN ARROW** to move to the desired menu option then press **ENTER**.

Programming Menu 1: PLU FILE

Use the **ENTER** and **DOWN ARROW** keys to navigate through PLU programming.

The following items have been added to PLU programming for the WPL-3000.

Address	Description
P01-26	Label Format (0-4)
P01-28	Label Print (0: Reference, 1: Straight, 2: Rotate)
P01-29	Upper Weight Limit
P01-30	Lower Weight Limit
P01-31	Tray Number

OPERATION

Transfer Mode

With no active PLU (display reads “KEY IN PLU NUMBER”) press the **START** function key to move packages across the conveyor system without weighing or labeling.

A.2 LABEL FORMAT WORKSHEETS

60mm x 44mm Label — WPL-3000 C-0916B~H — Format 1

Field #	Standard Function	Code Value	Old Value X-Width	Old Value Y-Height	New Value X-Width	New Value Y-Height
1	Store Name/Address	01	0008	0465		
2	PLU Description	06	0008	0364		
3	Barcode	05	0000	0165		
4	Pack Date	03	0153	0211		
5	Expiration Date	04	0010	0211		
6		00	0149	0147		
7	Unit Price ($/lb)	08	0299	0126		
8		00	0324	0126		
9	Weight	09	0459	0216		
10	Total price	07	0367	0067		
11	PLU Number	02	0486	0132		
12	Price before Discount	13	0427	0036		
13	Markdown Line 1	13	0427	0027		
14	Markdown Line 2	13	0427	0018		
15	Discounted Price	14	0427	0067		
16	Single Pc. - (Fixed Pr.)	21	0156	0216		
17	Single “PC” (Fixed Pr.)	21	0224	0211		
18	Price Including Tax	11	0367	0067		
19	“AMOUNT TOTAL”	11	0375	0097		
20	Transaction Number	12	0251	0037		
21	Transaction Number	12	0295	0031		
22	PLU Name 2	49	0008	0364		
23		62	0016	0241		
24	“Sell By ...” Random Wt.	63	0016	0241		
25		8D	0016	0241		
26	“Sell By” Fixed Price	6B	0016	0214		
27	“TOTAL PRICE” Legend	90	0405	0106		
28	Ad Message 1	0E	9999	0000		
29	Sign	0B	0340	0060		
30	Sub-Total - Price	28	0342	0067		
31	Sub-Total - Weight	27	0390	0211		
32	Sub-Total - Pieces	26	0067	0051		
33	Piece Count	2C	0156	0216		
34	“PCS” Legend	2C	0224	0211		
35	“@” Legend	2B	0286	0211		
36	@ Count	2B	0305	0216		
37	“ / ” Legend	2B	0372	0211		
38	@/For Price	2D	0391	0216		
39	Total OZ Weight	32	0337	0166		
40	Total “oz” Symbol	32	0373	0156		
41	“(” Symbol	32	0415	0166		
42	“)” Symbol	32	0572	0166		
43	LB Wt. inside ( )	31	0434	0166		
44	“lb” Symbol	31	0471	0156		
45	OZ Wt. inside ( )	30	0513	0166		
46	“oz” Symbol	30	0549	0156		
47		00	0013	0427		
48		00	0013	0394		
49						
50						

Note: The height values of fields 1 and 2 are dependent on the height of the text area. As the text area increases, the height position of these fields also increases, as do any data fields printed above the text.

Note: Navigation - use ↑ ↓ keys to select FIELD NUMBERS
use → key to select X (Width) or Y (Height).

64mm x 85mm Safe Handling Label WPL-3000 C-0916B~H Format 2

Field #	Standard Function	Code Value	Old Value		New Value	
			X-Width	Y-Height	**X-Width**	**Y-Height**
1	Store Name/Address	01	0016	0883		***(499)***
2	PLU Description	06	0016	0783		***(415)***
3	Barcode	05	0008	0198		
4	Pack Date	03	0162	0271		
5	Expiration Date	04	0018	0271		
6		00	0157	0180		
7	Unit Price ($/lb)	08	0305	0276		
8	Weight	09	0467	0276		
9	Total Price	07	0375	0100		
10	PLU Number	02	0494	0168		
11	Price before Discount	13	0436	0067		
12	Markdown Line 1	13	0436	0058		
13	Markdown Line 2	13	0436	0049		
14	Discounted Price	14	0436	0100		
15		00	0157	0180		
16	Single PC. - (Fixed Pr.)	21	0164	0276		
17	Single “PC” (Fixed Pr.)	21	0232	0271		
18	Price Including Tax	11	0375	0100		
19	“AMOUNT TOTAL”	11	0383	0130		
20	Transaction Number	12	0494	0220		
21	“PCS”	12	0538	0214		
22	PLU Name 2	49	0016	0783		
23		62	0024	0300		
24	“Sell By ...” Random Wt.	63	0024	0300		
25		8D	0024	0300		
26	“Sell By” Fixed Price	6B	0024	0300		
27	“TOTAL PRICE” Legend	90	0413	0139		

Field #	Standard Function	Code Value	Old Value		New Value	
			X-Width	Y-Height	**X-Width**	**Y-Height**
28	Ad Message 1	0E	9999	0000		
29	Sign	0B	0348	0093		
30	Sub-Total - Price	28	0351	0100		
31	Sub-Total - Weight	27	0390	0271		
32	Sub-Total - Pieces	26	0075	0084		
33	Piece Count	2C	0164	0276		
34	“PCS” Legend	2C	0232	0271		
35	“@” Legend	2B	0294	0271		
36	@ Count	2B	0313	0276		
37	“ / ” Legend	2B	0380	0271		
38	@/For Price	2D	0399	0276		
39	Total OZ Weight	32	0345	0232		
40	Total “oz” Symbol	32	0382	0222		
41	“(” Symbol	32	0423	0232		
42	“)” Symbol	32	0580	0232		
43	LB Wt. inside ( )	31	0442	0232		
44	“lb” Symbol	31	0479	0222		
45	OZ Wt. inside ( )	30	0521	0232		
46	“oz” Symbol	30	0557	0222		
47	Safe Handling Panel	8C	0008	0657	***(9999)***	
48						
49						
50						

Note: The height values of fields 1 and 2 are dependent on the height of the text area. As the text area increases, the height position of these fields also increases, as do any data fields printed above the text.
The numbers in parenthesis and in ***italics*** may be used to change this format to the 64mm x 47mm standard Ishida label.

64mm x 110mm Bakery Label WPL-3000 C-0916B~H Format 3

Field #	Standard Function	Code Value	Old Value		New Value	
			X-Width	Y-Height	**X-Width**	**Y-Height**
1	Store Name/Address	01	0008	0780		
2	PLU Description	06	0008	0421		
3	Barcode	05	0135	0165		
4	Pack Date	03	0016	0490		
5		00	0324	0490		
6	Total Price	07	0367	0490		
7	Price before Discount	13	0427	0457		
8	Markdown Line 1	13	0427	0448		
9	Markdown Line 2	13	0427	0439		
10	Discounted Price	14	0427	0490		
11	Name 2	49	0008	0421		
12	“Fixed Price” Legend	62	0016	0529		
13	“$/lb weight” Legend	63	0016	0529		
14	“Date” Legend	8D	0016	0529		
15	Fractional Price Legend	6B	0016	0529		
16	“Total Price” Legend	90	0405	0531		
17	Sub-Total - Amount	28	0342	0490		
18	Sub-Total - Weight	27	0390	0490		
19	Sub-Total - Pieces	26	0067	0051		
20	“NET WT.” Legend	91	0024	0271		
21	Total OZ Weight	32	0211	0271		
22	Total “OZ” Legend	32	0264	0271		
23	“( )” Symbol	32	0562	0271		
24	LB Weight	31	0341	0271		
25	“LB” Symbol	31	0394	0271		
26	OZ Weight	30	0457	0271		
27	“OZ” Symbol	30	0510	0271		

Field #	Standard Function	Code Value	Old Value		New Value	
			X-Width	Y-Height	**X-Width**	**Y-Height**
28		00	0016	0457		
29		0B				
30		28				
31		27				
32		26				
33		2C				
34		2C				
35		2B				
36		2B				
37		2B				
38		2D				
39		32				
40		32				
41		32				
42		32				
43		31				
44		31				
45		30				
46		30				
47		00				
48		00				
49						
50						

Note: The height values of fields 1 and 2 are dependent on the height of the text area. As the text area increases, the height position of these fields also increases, as do any data fields printed above the text.

Note: Navigation - use ↑ ↓ keys to select FIELD NUMBERS
use → key to select X (Width) or Y (Height).

66mm x 85mm Coupon Label WPL-3000 C-0916B~H Format 4

Field #	Standard Function	Code Value	Old Value		New Value	
			X-Width	Y-Height	**X-Width**	**Y-Height**
1	Store Name/Address	01	0008	0625		
2	PLU Description	06	0008	0525		
3	Barcode	05	0000	0163		
4	Pack Date	03	0243	0363		
5		00	0000	0000		
6	Pack Time	50	0018	0315		
7	Unit Price ($/lb)	08	0008	0363		
8		00	0000	0000		
9	Weight	09	0008	0270		
10	Total price	07	0159	0294		
11	PLU Number	02	0351	0034		
12		00	0000	0000		
13	Price before Markdown	13	0224	0261		
14	Markdown Line 1	13	0224	0252		
15	Markdown Line 2	13	0224	0243		
16	Discounted Price	14	0224	0294		
17		00	0000	0000		
18		00	0000	0000		
19		00	0000	0000		
20		00	0000	0000		
21	Tax Amount	3C	0213	0186		
22	“Tax” Legend	3C	0143	0186		
23	Price Including Tax	11	0145	0123		
24	“AMOUNT TOTAL”	11	0143	0301		
25	Transaction Number	12	0029	0159		
26	“PCS”	12	0074	0151		
27	PLU Name 2	49	0008	0525		
28		62	0008	0402		
29	“$/lb Pack Date”	63	0008	0402		
30		8D	0008	0402		
31	“Weight (lb.)”	63	0008	0222		
32		8D	0008	0222		
33	“TOTAL PRICE” Legend	90	0202	0222		
34	Coupon Area	64	0407	0522		
35	Ingredients	0C	0008	0525		
36		47	0008	0525		
37	Ad Message 1	0E	9999	0000		
38		00	0147	0270		
39	Sub-Total - Price	28	0137	0294		
40	Sub-Total - Weight	27	0010	0363		
41	Sub-Total - Pieces	26	0005	0270		
42						
43						
44						
45						
46						
47						
48						
49						
50						

Note: The height values of fields 1 and 2 are dependent on the height of the text area. As the text area increases, the height position of these fields also increases, as do any data fields printed above the text.

Note: Navigation - use ↑ ↓ keys to select FIELD NUMBERS
use → key to select X (Width) or Y (Height).

66mm x 145mm Landscape Bakery with Nutrition WPL-3000 C-0916B~H Format 5

Field #	Standard Function	Code Value	Old Value		New Value	
			X-Width	Y-Height	**X-Width**	**Y-Height**
1	Store Name/Address	01	0067	1350		
2	PLU Description	06	0510	1350		
3	Barcode	05	0000	0195		
4	Pack Date	03	0550	1350		
5	Total Price (A)	07	0367	0165		
6	Total Price (B)	07	0567	0934		
7	Markdown Line 1 (B)	13	0537	0865		
8	Markdown Line 2 (B)	13	0519	0865		
9	Discounted Price (A)	14	0367	0165		
10	Discounted Price (B)	14	0567	0865		
11	“NET WT.” Legend	91	0121	1354		
12	Fixed Wt. - Total oz	32	0121	1135		
13	Fixed Wt. - “oz (”	32	0121	1078		
14	Fixed Wt. - “)”	32	0121	0736		
15	Fixed Wt. - lb	31	0121	0991		
16	Fixed Wt. - “lb.”	31	0121	0934		
17	Fixed Wt. - oz	30	0121	0850		
18	Fixed Wt. - “oz”	30	0121	0793		
19	Nutritional Box	92	0000	0640		
20		00	0149	0160		
21	Serving Size	6C	0544	0399		
22	Servings per Container	6D	0518	0345		
23	Calories	6E	0434	0526		
24	Fat Calories	6F	0434	0307		
25	Total Fat	70	0360	0390		
26	Total Fat - units	71	0360	0348		
27	Total Fat - %	72	0360	0318		

Field #	Standard Function	Code Value	Old Value		New Value	
			X-Width	Y-Height	**X-Width**	**Y-Height**
28	Saturated Fat	73	0328	0390		
29	Saturated Fat - units	74	0328	0348		
30	Saturated Fat - %	75	0328	0318		
31	Cholesterol	76	0295	0390		
32	Cholesterol - units	77	0295	0348		
33	Cholesterol - %	78	0295	0318		
34	Sodium	79	0261	0403		
35	Sodium - units	7A	0261	0348		
36	Sodium - %	7B	0261	0318		
37	Carbohydrate	7C	0229	0403		
38	Carbohydrate - units	7D	0229	0348		
39	Carbohydrate - %	7E	0229	0318		
40	Dietary Fiber	7F	0198	0390		
41	Dietary Fiber - units	80	0198	0348		
42	Sugars	85	0164	0390		
43	Sugars - units	86	0164	0348		
44	Protein	82	0135	0390		
45	Protein - units	83	0135	0348		
46	Vitamin A - %	88	0091	0513		
47	Vitamin C - %	89	0091	0318		
48	Calcium - %	8A	0059	0513		
49	Iron - %	8B	0059	0318		
50						

Note: Navigation - use ↑ ↓ keys to select FIELD NUMBERS
use → key to select X (Width) or Y (Height).

64mm x 90mm with Vertical Nutrition WPL-3000 C-0916B~H Format 6

Field #	Standard Function	Code Value	Old Value		New Value	
			X-Width	Y-Height	**X-Width**	**Y-Height**
1	Store Name/Address	01	0008	0903		
2	PLU Description	06	0008	0802		
3	Pack Date	03	0410	0564		
4	Expiration Date	04	0410	0624		
5	Unit Price ($/lb)	08	0434	0459		
6	Weight	09	0456	0354		
7	Total Price	07	0367	0067		
8	Price before Discount	13	0430	0036		
9	Markdown line	13	0430	0022		
10	Discounted Price	14	0430	0067		
11	Tare Weight	22	0477	0207		
12	PLU Number	02	0486	0103		
13		62	0475	0489		
14		62	0442	0384		
15		6B	0475	0489		
16		6B	0442	0384		
17	Title	63	0475	0489		
18	“Weight (lb)” - title	63	0442	0384		
19	Sub-Total - Price	28	0342	0067		
20	Nutritional Box (upper half)	92	0000	0684		
21	Nutritional Box (lower half)	92	0000	0348		
22	Serving Size	6C	0216	0616		
23	Servings per Container	6D	0264	0583		
24	Calories	6E	0102	0493		
25	Fat Calories	6F	0294	0493		
26	Total Fat	70	0221	0412		
27	Total Fat - units	71	0260	0412		
28	Total Fat - %	72	0287	0412		
29	Saturated Fat	73	0221	0375		
30	Saturated Fat - units	74	0260	0375		
31	Saturated Fat - %	75	0287	0375		
32	Cholesterol	76	0221	0339		
33	Cholesterol - units	77	0260	0339		
34	Cholesterol - %	78	0287	0339		
35	Sodium	79	0209	0303		
36	Sodium - units	7A	0260	0303		
37	Sodium - %	7B	0287	0303		
38	Carbohydrates	7C	0209	0268		
39	Carbohydrates - units	7D	0260	0268		
40	Carbohydrates - %	7E	0287	0268		
41	Dietary Fiber	7F	0221	0232		
42	Dietary Fiber - units	80	0260	0232		
43	Sugars	85	0221	0196		
44	Sugars - units	86	0260	0196		
45	Protein	82	0221	0159		
46	Protein - units	83	0260	0159		
47	Vitamin A - %	88	0113	0114		
48	Vitamin C - %	89	0287	0114		
49	Calcium - %	8A	0113	0081		
50	Iron - %	8B	0287	0081		

Note: The height values of fields 1 and 2 are dependent on the height of the text area. As the text area increases, the height position of these fields also increases, as do any data fields printed above the text.

Note: Navigation - use ↑ ↓ keys to select FIELD NUMBERS
use → key to select X (Width) or Y (Height).

64mm x 59mm Safe Handling WPL-3000 C-0916B~H Format 7

Field #	Standard Function	Code Value	Old Value		New Value	
			X-Width	Y-Height	**X-Width**	**Y-Height**
1	Store Name/Address	01	0008	0591		
2	PLU Description	06	0008	0490		
3	Barcode	05	0000	0097		
4	Pack Date	03	0449	0133		
5	Expiration Date	04	0449	0169		
6	Tare Weight	22	0349	0090		
7	Unit Price ($/lb)	08	0129	0139		
8		00	0324	0126		
9	Weight	09	0000	0139		
10	Total price	07	0379	0064		
11	PLU Number	02	0318	0000		
12	Price before Discount	13	0437	0031		
13	Markdown Line	13	0437	0016		
14	Discounted Price	14	0437	0064		
15	Single PC - (Fixed Wt.)	21	0000	0139		
16	Single “PC” - (Fixed Wt.)	21	0067	0135		
17	Ad Message 1	0E	9999	0000		
18	Sub-Total - Price	28	0342	0064		
19	Sub-Total - Weight	27	0000	0130		
20	Sub-Total - Pieces	26	0067	0051		
21	Piece Count	2C	0000	0139		
22	“PCS” Legend	2C	0067	0135		
23	Total OZ	32	0349	0100		
24	Symbol “oz”	32	0386	0090		
25	Symbol “(”	32	0426	0100		
26	Symbol “)”	32	0584	0100		
27	LB inside ( )	31	0445	0100		

Field #	Standard Function	Code Value	Old Value		New Value	
			X-Width	Y-Height	**X-Width**	**Y-Height**
28	Symbol “lb”	31	0484	0090		
29	OZ inside ( )	30	0526	0100		
30	Symbol “oz”	30	0561	0090		
31						
32						
33						
34						
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Note: The height values of fields 1 and 2 are dependent on the height of the text area. As the text area increases, the height position of these fields also increases, as do any data fields printed above the text.

Note: Navigation - use ↑ ↓ keys to select FIELD NUMBERS
use → key to select X (Width) or Y (Height).

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